

AMERICAN AGRICULTURIST.

Designed to improve all Classes interested in Soil Culture.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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WORK FOR THE MONTH.

Now the bright morning star, day's harbinger,
Comes dancing from the East, and leads with her
The Flowery May, who from her green lap throws
The yellow cowslip and the pale primrose.
Hail bounteous May! that dost inspire
Mirth and youth and warm desire;
Woods and groves are of thy blessing.
Thus we salute thee with our early song,
And welcome thee and wish thee long.

MILTON.

The blind bard of rural England, never
forgot the fair landscapes, the green fields
and wooded vales, of his native land.
Though he might see no more the light of
the sun nor "human face divine," these,
and all the fair sights of Nature lived in his
memory, and inspired his muse. He felt
the touch of Spring thrilling through his
soul, as joyously as if he could see the
bright morning star, and the cowslips, and
the primroses of which he sung.

Few are so stolid as not to feel a new
sensation glowing in their hearts, when the
winds from the sweet South begin to blow,
when there is first a Summer glow in the air,
and the fields put on their robes of green,
and flowers come forth like gems, upon the
verdant turf. The spirit of the advancing
season is infectious, and cold must be the
heart that is not moved by the blithe song of
birds, and the breath of flowers, that now
comes wafted upon every breeze. The
long doubtful struggle between Winter and
Summer is at length ended, and there is, on
every hand, indications of earnest work.

Our Springs are always long and lingering,
and the complaint of backwardness, cold, and
wet, made this season have probably been
made every season since the settlement of
the country. The prevailing winds are
from the North-west and the North-east,
and we have the breath of Winter chilling
us long after the spell of Winter is broken.
There is however a difference in the Seasons,
owing to causes that we do not yet
perfectly understand. Backward as the
Springs are, some are more so than others.
Though the past winter was uncommonly
severe, and we had cold more intense than
has visited us for forty years, the Spring
opened earlier than usual. A warm term
commenced the last of February, carrying
off most of the snow and opening the
Hudson and Connecticut rivers for naviga-
tion. In some places in the valleys of these

rivers, the thermometer rose to 80 degrees,
and the buds of fruit trees rapidly swelled.
We have not heard however, that any injury
was done to the fruit trees, by this un-
seasonable weather. The first crocus made
its appearance in our garden, just a week
sooner than last year, and we had our first
cutting of Asparagus under glass on the
20th of March, some ten days earlier than
last year.

This long reign of the cold and wet, in
Spring, concentrates the work of seed time
into a very few days. Every thing is hur-
ried now, and the whole success of the Sea-
son hinges upon our activity in this month.
Many have had their fields so wet that they
were not able to plow during the month of
April, and they now have their manures
to spread and plow in, before they can seed
down their land, and put in their hoed crops.
This shortness of planting time has been
foreseen by the experienced, and skilled
cultivator, and he has every thing in readi-
ness for the emergency. His manures were
put upon the ground in heaps ready for
spreading, before the frost left it, and while
the carting was good. He has seen the folly
of worrying cattle, with a heavy load of
manure through muddy fields, just as the
frost was breaking up. His tools are all in
complete order, and his cattle are sleek and
healthy, and ready for labor. He has pro-
vided help enough for this busy season, and
every crop goes into the soil, in the best
time, and in the best condition.

DRAINING

is a lesson taught by our late Springs and
we are happy to say a lesson that is begin-
ning to be learned, by our best cultivators.
They have discovered that soil, well under-
drained is in good condition for planting, full
a week earlier than the same kind of
land in its natural condition. The drains
take off the surplus water, as soon as the
frost releases its hold, and of course, the
temperature is at once raised over the whole
surface. It receives at once the full bene-
fit of the sun's rays, and may be planted two
weeks earlier than undrained land. Some
quite intelligent farmers who have never
seen the operation of underdraining, suspect
that our teachings upon this subject are pure-
ly theoretical, drawn from the practice of
English husbandry. It is true that under-
draining has been more extensively practi-
ced in England, than in this country, and
that its utility there is placed beyond con-
troversy. But though underdraining is yet
in its infancy in this country, it is by no
means a mere theory. It is well attested

by many who have tried it on a large scale.

We will give as an example a trial of drain-
ing upon a part of our garden, embracing
nearly a half acre, where stone was used as
the draining material, because they were
most convenient for our purpose. This
was formerly a swamp producing nothing
but sour grapes and briars. It is now the
best part of our garden, growing the various
kinds of fruit trees and vegetables in the
greatest luxuriance. A part of it is appro-
priated to asparagus, and we have noticed
for two seasons, that the shoots upon the
drained soil are full a week earlier, than
those of a bed in another part of the garden,
though it stands upon high ground, and has
the benefit of the morning sun. We have
no doubt the drainage makes this difference.

Now if the farmer had faith in underdrain-
ing, and would try it upon a part of his
fields, he would be able to begin his planting
very much earlier, and would thus
have a longer seed time. Its effect would
be, not only to improve the quality of the
soil by taking off its excess of water, and its
acids, but to raise its temperature and to
prolong the season, which is a very impor-
tant matter with many crops. Two weeks
added to the growing of corn before the
frost strikes it, would add greatly to its
value—in many localities in the northern
States. Under-draining, once commenced,
will work conviction upon the most sceptical.

SEEDING LAND TO GRASS

Many will be sowing grass seed with their
Spring wheat and oats the first of this month.
The sooner these crops are in, the better.
It is a common error to sow too little grass
seed. Timothy, red top, blue top, and clover
are expensive, and most farmers purchase
rather than raise their own seeds. Where
the seed is not thick enough, the ground
either lies idle, or is occupied by weeds.
This is very poor husbandry, after carrying
a field through a course of crops and
manuring thoroughly to prepare it for grass.
Be generous with the grass seed, if you
wish good crops of hay in after years. One
bushel of red top or furze; twelve quarts of
herbs grass, and six pounds of clover are
none too much for an acre. We have used
this Spring a half bushel of herbs grass seed
to the acre, and though this seed is very
expensive, we consider the money well laid
out. The difference in the crop, for four or
five years will more than pay the extra price
of the seed. A variety of grass seeds is
better than any one kind. The cattle will
eat it better, and it stocks the land more
perfectly.

3-3 1/2
2-
2-2
1-5
1-8 1/2
10-9

21.

GRAFTING

if not already done, should be finished the first of this month. This process has been so often described in our pages, and is so well treated in the manuals on fruit trees, that we need not describe it here. It is so simple, that an intelligent boy of a dozen summers can successfully perform it, with a very little practice. And the boys should be early taught to graft, and to interest themselves in fruit growing. There is nothing better to bind them to the old home-stead, or if they leave it for other callings, to make them fruit growers in the small gardens of our cities and villages. Almost every long cultivated farm, has its old apple and pear trees, that only need new tops to make them very valuable. They are still vigorous, but produce nothing but small sour fruit. These trees, if judiciously grafted will yield fruit much sooner than young trees, and in a few years, will bring large returns. A sound well grown apple tree near home is worth fifty dollars, for the purpose of grafting. It can be made to pay the interest on a much larger sum for a generation to come. We know of a large seedling pear, standing near our premises that we would gladly give a hundred for, if it could be set down uninjured in our fruit yard. In a few years it could be made to produce bushels of fine Bartlett pears, which always bear a high price in the market.

THE GARDEN.

Let not the pressure of full work tempt you to overlook the garden. A man who works hard should be well fed with the best vegetables and fruits, the earth affords. The feeders of the world should patronize their own art, and spread a good table, upon the same principle that a tailor wears good broadcloth, in the most fashionable style. It is his best advertisement. A farmer who raises fine vegetables in his garden, and knows their value by use—will soon carry them to market, and lead others to try them. If he cultivate squashes, cabbage, cauliflower, tomatoes, salsify, and egg-plant, he will not be long in finding a market for them, in the neighboring village or city. Men who labor want a variety of food, and the farmer's garden should abound with every thing good to eat, from the asparagus bed due on the first of May, to the tap roots that are harvested with the frosts of Autumn. The moral influence of a garden upon the household is most happy, and we have rarely met with a vicious child, whose early years were familiar with his father's vegetable beds, and his mother's flower border. The garden comes next after the church, and the school house, and is a worthy co-operator with those institutions. It beautifies home wonderfully, and kindles emotions which never die out of the heart.

Now is the time to put in the seeds, and provide the raw material for the numerous tempting dishes, which every good housewife knows how to prepare, from parsley, and celery, from salsify and egg-plant, from okra and beans, from cucumbers, melons and squashes, from the tap roots, and from corn. Improve the seed time of these plants, and rejoice in the harvest.

CALENDAR OF OPERATIONS.

MAY, 1857.

[We put down here a summary of various operations, many of them very common ones, it is true, but a simple catalogue like this will often suggest a piece of work that would otherwise be forgotten. The Calendar is adapted to the latitudes of 41° to 42°. A little allowance must be made for each degree of latitude—later north—earlier south. This table will be made out anew every month and adapted to the season of each year.

EXPLANATIONS.—The letters f. m. l. refer to *first*, *middle*, and *last* of the month.

Doubling the letters thus: ff., mm., or ll., gives emphasis to the particular period indicated.]

FARM.

We suppose every farmer is not only "read up," but has fully matured his plans for the season, and is now vigorously prosecuting them. This is a month of toil, during which the husbandman casts his seed into the earth, and with confidence awaits the springing blades. It is of the first importance that the soil be properly prepared, by manuring and plowing, and that *good seed* be carefully put in. Inattention to these matters will often cause a failure of the crop no matter how thorough the after treatment or how favorable the weather.

Barley—Sow ff. m.

Beans—Plant by themselves, or among corn f. mm. l.

Beets—Sow for market and feeding stock, m. ll.; for early table use ff. if not already done.

Broom Corn—Plant f. m. See page 57 March No.

Carrots—Sow ff. m. on deep, well manured ground.

Cattle—Do not turn out to pasture too early—Partial dry food with their early grazing is best.

Cellars—If not already attended to, then at once cleanse from decaying vegetables and other impurities, scrubbing and white-washing the walls. Ventilate freely. Health as well as comfort demands immediate thorough attention to this point. Remember the National Hotel, at Washington, and the great numbers still sick owing to the impure drains and cellars there.

Clover should have been sown last month upon fields of winter grain. It may still be sown with spring grain and for plowing under. At the far North, it may yet be sown upon frozen fields in the morning.

Corn—Plant f. mm. l. for field crops, and drill or sow broadcast for soiling ll. Prove your seed if any doubts exist as to its germination. Forty-eight hours, under favorable circumstances will test its vitality.

Draining—Continue as opportunity offers. Read articles on, and see Work for the Month in this number.

Fences—Complete any unfinished, and see that all are in good order, especially around grain fields. "A stitch in time saves nine."

Flax—Sow ff. m.

Harrow all grounds to be sown or planted until they are of a fine tilth.

Hemp—Sow f. m.

Horses and Mules—Take good and kind care of working teams, graining with Indian meal and oats now that their labor is heavy. If turned out to pasture at any time, give them free access to a warm stable or shed. Working animals can "catch cold" and have the "consumption" as well as human beings.

Lucern—Sow ff. m. This crop should be more extensively raised.

Manures—Collect and use ff. m. exposing as little as may be to sun and air; evaporation takes place rapidly in warm weather. If large heaps are exposed in the fields cover them with plaster, muck, or earth from head lands.

Meadows—Keep fenced, and do not allow cattle to trample them. Top dress poorer fields with any thoroughly rotted manure, or with well pulverized sifted guano, or fine bones. Plaster is generally good, and almost always so upon clover.

Millet—Sow f. m. l.

Oats—Sow ff. m. if not done in April.

Pastures—Do not rely upon these too early, but give full or partial dry feed at present.

Peas—Sow f. m. scalding them to destroy bugs, by a brief soaking in hot water.

Plowing—Turn up the soil a little deeper than at the last plowing.

Potatoes—Plant ff. m. if not already in. Early planting is much preferable. Select varieties not subject to decay, even if not worth as much as a few cents per bushel. Remember that "like produces like." See remarks in April number, middle of first column on page 78.

Pumpkins—Plant f. mm. l. among corn, potatoes and in patches by themselves. Raise a good supply for cattle and hogs. No crop pays better especially on new land.

Rye—Sow Spring varieties ff. m.

Salt Meadows—Ditch ff. m. l. using the mud for composting next fall.

Sheep—Give extra feed to ewes with lamb. Wash m. ll. Do not shear too early. After shearing be sure to give them access to warm dry sheds at night and on cool or damp days. This is important.

Sorghum—Plant ff. m. and l. according to directions given in last number.

Swine—Attend to the increase of, both at this season and in Autumn among those to be wintered over. Cleanse yards and pens using charcoal dust or plaster. Cart in muck, scrapings, or head lands as soon as the manure is all out. Remember that it costs but little more to get a litter of good pigs than a poor one, therefore secure the service of good males as well as females. Do not let sows run in the street to every wild, ill-bred male that chances in their way.

Timothy—Sow ff. with Spring grain or clover.

Tobacco—Plant out f. m. See chapter on culture, page 54 of March number.

Tools of the most approved varieties are doubtless purchased and in daily use. House them at night.

Turnips—Sow flat and stone varieties ff. m. for early use. A few Russias may be sown ll. for fall use.

Wheat—In the more Northern, or cold localities, where not already done, sow Spring varieties ff. m. and keep cattle from Winter fields.

ORCHARD AND NURSERY.

The preparation of the ground and completing of orchard planting, renders the present a busy month. Transplanting not already done should be performed as early in May as possible, and that too in the most thorough manner. Dig large holes and spread out the roots and fibres, filling in carefully with rich mold or compost mixed with earth.

Apples—Plant standards and stocks in Orchard and Nursery ff. m.

Budded Trees—Remove suckers ll. from trees budded last season.

Cherries—Plant trees ff. if not already done. Put out stocks at once.

Evergreens—Transplant f. mm. l. We regard the time of their first growth for the season as the best period to plant evergreens. Keep the roots from the sun during the operation. See articles on Evergreen Trees and Shrubs.

Grafting—May be done ff. on some late growing varieties, provided the scions were cut at the proper season and have been carefully preserved.

Hoeing of Nursery rows—Attend to f. m. l.

Insects—Destroy ff. m. l. especially caterpillars in the first stages of their growth. See article on "Borers."

Mulch newly planted trees in orchard and along fences to keep the ground moist and free from weeds.

Orchards—We advise keeping these plowed for the most part. Young orchards can be laid down to grass provided a good space around each tree is kept dug up. Hoed crops, especially potatoes and turnips, are very suitable for an orchard, if a good manure dressing is yearly applied. Buckwheat is perhaps, the best grain crop. Do not plow too closely to the trees, although no grass, weeds, or grain should grow about the trunks. Lime or ashes applied in moderate quantities about each tree will essentially benefit it.

Ornamental Trees—Complete planting the different varieties as early in the month as possible.

Peaches, Apricots and Nectarines—Finish planting ff. any that were neglected last month. Shorten in or train, as espalier ff.

Pears—Plant ff. both standards for field, and dwarfs for garden culture. Select as dwarfs only those varieties known to succeed well upon the quince. We do not recommend planting many of these even in a garden, preferring the pear on its own roots, with very few exceptions. Dwarfs are very good to set in alternate rows with standards, the former come sooner to fruit and ten to one will be out of the way by the time their room is wanted.

Plow or use cultivator between nursery rows, and turn up the sod of old orchards.

Plums—Plant ff. if not completed. Cut out all warty or diseased branches.

Pruning should be restricted this month to removing diseased or mutilated branches, and shortening-in and shaping the heads of standards.

Quinces—Plant ff. m.

Seed Beds of Trees—Weed and hoe f. m. l.

Shrubs—Plant ff. especially early blooming varieties that were not put in last month.

Transplanting of trees and shrubbery both deciduous and ornamental—Continue ff. m. and evergreens mm. l.

Vines—Read article on grapes.

Wall Trees—Train and regulate.

KITCHEN AND FRUIT GARDEN.

May is emphatically a busy month in the garden, even though a portion of the labors were in April. Seeds of nearly all kinds require planting during this month—many of them in the early part of it. The after labor being the same, it is very important that the ground be thoroughly prepared by deep plowing or trenching, and heavy manuring, that good seed be used, and that it be put in in the best manner. In no department does extra care and labor pay better than in vegetable gardening.

Artichokes—Plant ff., if not already done. Clean former plantings m. l.

Asparagus—Old beds are doubtless uncovered and forked over. New beds may be made and seed sown ff. Cutting will commence m. or even earlier in favorable localities.

Balm—Plant ff.

Basil—Plant out ff. Seed may also be sown ff. if omitted last month.

Beans—Read article on starting Limas. Set poles for beans at the time of planting.

Beets—Sow ff. for early, and ll. for winter use. Radish seed may be mixed with beet seed or in intermediate drills. The former will be large enough to pull before injuring the latter. Weed and thin those sowed last month.

Blackberries—Plant New Rochelle (Lawton), ff. If already in so much the better. We planted April 14.

Borage—Sow ff.

Borecole—Sow ff. Plant out and hoe m.

Broccoli—Sow ff. Plant and prick out m.

Burnet—Sow and plant for salad f. m.

Cabbages—Sow ff. if not done last month. Plant out ff. for early, and ll. for late. Hoe young plants often.

Capricorn—Plant ff.

Caroone and Caraway—Sow ff. m.

Carrots—Sow ff. on deeply plowed soil. They may be sown m. but the earlier the better. Hoe and thin m. l.

Cauliflower—Sow f. for Autumn and Winter use. Plant out ff. and remove hand glasses from those planted last month.

Celery—Sow ff. Plant out for early f. to m. watering freely.

Chives—Plant ff.

Cold Frames—Finish planting from these ff.

Coriander—Sow f. m.

Corn—Plant sweet varieties ff. m. l. for succession.

Cress—Sow ff.

Cucumbers—Plant ff. m. Transplant at the same time from hot-beds. Guard against the striped bug by using boxes covered with millet. Tobacco dust or snuff, soot and guano, dusted over the young plants are partial preventives of the ravages of these insects. See article.

Currants—Plant ff. if delayed till this time. Cuttings may be put in if they have been kept from growing. See article.

Dill—Sow ff.

Economise grounds by planting the small early vegetables, such as radishes, spinach, lettuce, cress, &c., between crops which afterwards cover the ground. Radishes may be sown among beets, in the hills of vines, or potatoes, or any of the above may be sown contiguous to cucumbers or squashes which will cover the ground after the early crops are removed. Late corn, turnips, and cabbages may also be planted between the rows of early potatoes.

Egg Plants—Set out f. mm. Sow seed ff. although it is better to obtain plants if you have not produced them in a hot bed.

Garlic—Plant ff.

Grapes—Read article on. Omit pruning this month save rubbing off superfluous shoots. Fasten to trellises or stakes at once if left till now.

Hot Beds—Plant from ff. m., airing each day until all the plants are removed.

Leeks—So w ff.

Lettuce—Sow and plant out ff. m. l. for succession. See that worthless kinds are not sown.

Marjoram may still be sown if not done in April.

Melons—Plant and remove from hot bed f. m. Protect from bugs as recommended for cucumbers. Plant away from other vines if seed is wanted.

Mushroom Beds—Make ff.

Mustard and Nasturtiums—Sow ff. m.

Okra—Sow ff. m. Weed early sowings m. ll.

Parsley—Sow and plant ff. Read April No., page 74.

Parsneps—Sow ff. on deeply trenched soil. See page 86 last month. Also article in this number.

Peas—Sow ff. m. l. for succession. Hoe and stick early sowings f. m.

Potatoes—Plant ff.

Radishes—Sow f. m. l.

Raspberries—These were probably planted last month and buried canes lifted. If not, there should be no delay now. Stake plants as soon as set or uncovered.

Rhubarb—Set roots and fork in manure around, ff. if not done already.

Sage and Savory—Sow ff.

Salsify or Vegetable Oyster—Sow ff. Hoe and thin out, m. l. This is the best vegetable we raise. Ever since the ground opened we have been able to dig fine roots and prepare a dish superior to anything else in the vegetable line at this season. It is grown just as easily, and in the same manner as carrots. Get a paper of seed and try it. At the proper season we will give a mode of cooking it that will make a dish better than live oysters—for us.

Seeds—Set out the various winter vegetables such as turnips, cabbages, beets, onions, parsneps, carrots, salsify, till now.

&c., to provide a supply of pure seeds for next year's planting. Keep those of the same species widely apart, to prevent hybridizing.

Spinach—Sow ff. m. l. Thin out, leaving a few for seed. Strawberries may yet be planted ff. Weed old beds.

Tomatoes—Sow ff. and plant out for early at same time, and others during the month for late ripening.

Turnips—Sow early varieties ff. A few ruta bagas or Swedes may be sown f. m. l. but the main crop should not be put in during this month.

Weeds—Keep down in the early part of the season if you wish light work during the Summer, and heavy returns at harvest.

FLOWER GARDEN AND LAWN.

Especial attention will be required here, during this month. Grounds that were not manured and trenched, or deeply spaded last month will need this operation at once. Seeds of most varieties of annuals and biennials should be sown by the middle of the month. Many plants may now be brought from the parlors, from the Green and Hot-houses and from cold frames and pits. Transplanting also, of trees, shrubs and herbaceous plants requires to be done in the early part of the month.

Annuals—Remove from hot-beds and houses to open borders f. m. Sow seeds ff.

Asters—Sow ff. m.

Awnings—Continue to use in midday as shelter for Hyacinths and other choice bulbs now in bloom. The flowering season may be prolonged some weeks by so doing. See remarks upon "bulbs."

Balsams—Sow and plant ff. m.

Biennials—Sow and transplant ff.

Borders—Prepare and sow or plant ff. m. putting the taller growing varieties in the background.

Box Edging—Plant and put in slips ff. m. the sooner the better.

Bulbs—Beds of these made last fall in accordance with the directions then given will now make a splendid show and they are not deficient in "perfumery" especially when "kissed by the morning dew." A few of the more early, such as the crocus and snow-drop, have passed away, but the sweet scented Hyacinth, unassuming Iris, gaudy Tulip and majestic Crown Imperial are now in their glory, and that they may long continue thus, shield them from the hot sun by an awning of canvas or muslin secured to stakes three feet above the surface of the beds. This covering should be removed at night and during cloudy weather. Plant autumn blooming varieties, and from hand glasses ff.

Carnations—Plant out and sow seed ff. Remove side buds and support flower stalks by tying to neat stakes. Shade from midday sun to prolong their blooms.

Cinerarias—Plant and plant ff. m.

Dahlias—Plant from Green-house and boxes f. m. If roots have not been started, put them in boxes of earth ff. keeping in warm situations.

Dianthus and Delphinium—Sow and plant ff. m.

Dielytra Spectabilis—Plant ff. m. This is one of the most beautiful of new hardy flowering shrubs and is worthy of general introduction.

Evergreens—Plant trees and shrubs at any time during the month. The middle of May is perhaps the best time. Keep the roots from the sun while moving, and if earth adheres to them, so much the better. See article.

Fuchsias—Bring from the houses, to open borders m. l. Keep them well staked.

Geraniums—Plant on borders and in masses m. l.

Grass Edgings—Shear m. ll. and keep edges pared smooth.

Gravel Walks—Renew or give extra coating to old ones. Keep clear from weeds using the scuffle hoe which will not displace the gravel.

Hibiscus—Sow ff. m.

Hoe frequently, especially among tender annuals in the first stages of their growth.

Honeysuckles—Plant and regulate upon trellises ff.

Lawn—Sow bone sawings or fine dust, guano, &c. Keep clean and well rolled.

Lilies—Plant White, Tiger, Japan, &c., ff. if not already done.

Lupines—Sow ff. m. l.

Mignonette—Sow ff. m. l.

Mulch—Continue around newly planted trees especially evergreens.

Ornamental Trees and Shrubs—Plant ff. m. if not completed in April.

Perennials—Sow, put in slips and transplant ff.

Petunias—Sow and plant ff. m.

Phloxes—Sow and plant ff. m.

Polyanthus—Part if not done last month.

Portulaceas—Sow ff. m.

Rocket—Sow and part roots ff. m.

Roses—Plant and train ff. Bud ll.

Stakes—Provide a good supply for use as needed.

Tulips, Hyacinths and Crown Imperials—See bulbs.

Turf—Lay for edging, and on bare spots ff., if neglected till now.

Verbenas—Plant ff. m. on borders or in masses.

Water—Give in dry weather to plants newly removed. Do it thoroughly when necessary without repeating it too often.

Zinnia—Sow ff. m.

GREEN AND HOT HOUSE.

As fire heat is now partially suspended, and the plants more or less changed from one house to the other, we put the operations of the two houses together. Especial care should now be taken to admit

Air freely every mild day, avoiding a chilly atmosphere on tender plants. Fogs are also to be excluded.

Abutilon—Carry to borders m. l.

Bulbs—Plant out those done blooming in pots and hand glasses.

Cactuses—Examine for insects and syringe freely.

Callas—Continue to water freely while in bud and flower.

Camellias—Syringe freely, during the evening placing in airy situations.

Cinerarias—Water freely giving liquid manure.

Cuttings of woody shrubs and plants may still be put in.

Dahlias—Plant out those started in houses m. ll.

Earth in Pots—Stir and remove moss from them f. m. l.

Figs—Water and remove laterals, ff. m.

Fumigations—Give in houses affected with insects.

Hardy Plants and shrubs—Carry to flower borders m. l.

It is better to turn most of them carefully from the pots or tube. Do not expose tender plants too early by removing from the high temperature of a hot-house to the open ground. Better harden off in green house or cold graperies.

Inarching—Perform on free growing woody plants, especially oranges and lemons. Bind the parts firmly together with bass matting.

Insects—Watch the approach of as warm weather comes on. Destroy with tobacco fumes, syringe, sulphur, &c. A few destroyed now may crush colonies in embryo. See mixture recommended here last month.

Layering—Continue ff. m.

Leaves—Clean before taking to open grounds.

Oranges, Lemons and Myrtles—Plant out in summer situations m. l.

Potted Plants—Shift to larger size as is necessary ff. m.

Pruning—Omit mostly this month.

Water—Give frequently to strong growing plants. Avoid its use upon vines perfecting their fruit.

THE APAIRY.

[Mr. M. QUINBY, of St. Johnsville, N. Y., (Author of *Mysteries of Bee-Keeping Explained*), send us the following Notes for the Month. By the way, in a private note, he mentions the fact that he has managed over 500 swarms in three lots, and lost but two stocks the past winter!—Ed.]

A little timely care during this month, (May), in destroying the moth-worms, may save the Bee-keeper much loss and vexation before the end of summer. Several generations of them are produced in the course of one season. One destroyed now, is as beneficial as hundreds if not thousands in Autumn. The perfect moth, is not often found at this season, but her offspring, the worms may be. They, or the eggs from which they are hatched, have been saved from freezing to death by the warmth of the bees in the hive. Most of them will have obtained their growth among the combs, and been compelled by the bees to leave for safe quarters to spin their cocoons. Most of them will get on the bottom board during the night, and become chilled, where they may be found in the morning. To brush them out and wash their heads, will take but a few moments. There will be some under nearly every stock—even the best—but there is no cause for alarm unless the colony is extremely small. This is not the season of greatest mischief. July and August, is the time for extensive operations. When the bees become numerous, the hive may be raised half an inch. Now put under it, narrow shingles or elders split in halves with the pith removed, these will afford a safe retreat from the bees where they will spin their cocoons. These should be taken out once a week at least, and the worms destroyed, before the moth is matured.

Good stocks, in many sections, will begin to throw off swarms the last of this month. If a supply of empty hives are not already on hand to receive them, they should be at once provided. To wait until a swarm issues, and then have to prepare a hive, is bad economy. Bees will tolerate but little neglect just at this time—a good clean hive immediately offered, is accepted thankfully in ninety-nine times in a hundred, whereas an hour's delay, might put them so much out of sorts, that they would be satisfied with nothing. I risk but little in predicting that any Bee-keeper, who depends on making or preparing his hives as needed, will not have to do it many years. Negligence here, argues negligence in other points. If he succeeds it must indeed be "luck."

RURAL SURROUNDINGS.

NUMBER III.—THE SHEEP.

Our small or suburban farmers rarely keep sheep. There are some difficulties in the way, we admit. Still, they can be kept, and profitably too, with a little pains. Any dry land with sweet pasturage is suitable for the sheep, and no animal better repays the care and food which is devoted to them. Their wool is valuable always, as a commercial article, if not for household consumption, and no flesh is more palatable, healthful, nutritious and timely at the country table, from the lamb at two months to the mature wether at two years of age. The sheep is a timid creature, fearful of everything, even to the smallest dog, or a cat, and wherever kept, they should be secured from annoyance or fright from anything that may worry or destroy them. Their main enemy in compact, thickly-settled neighborhoods, is the dog. Headless people are very apt to keep a worthless cur or two running wild about their premises, and the creatures, in their nocturnal excursions, are quite apt to light on the first sheep-fold at hand, and commit a most reckless slaughter. Such outrages will ever be the case until these lawless persons learn better than to keep the nuisances, or the laws are made stringent enough to punish the dog-owners in a round penalty for the ravages they commit. Even, however, with such pests in the neighborhood, on a well-regulated farm of a few acres only, sheep may be kept to advantage.

We once knew a retired sea-captain who had some twenty acres of land, on which he resided, immediately adjoining the principal street of a very considerable New-England town, and many years kept a small flock of beautiful Merinos in his paddocks, Winter and Summer. They were always in sight from the street while in pasture, and grazed as securely and peacefully just over the stout stone wall which separated them from the continual passers-by, as if they were so many cows. They had a close shed where they could be fastened in every night, and no accident occurred in the many years that we knew them. They were a hobby of the liberal and wealthy gentleman who kept them, and in fine weather he was every day more or less among them. They were gentle as so many chickens, and would leap and play around him, and follow his footsteps wherever he chose to lead them. Being choice specimens of their race, they were attractive to all sheep-admirers who passed, and the country farmers were always ready to buy his surplus rams and ewes to add to and improve their own flocks at home; and thus, while indulging his hobby, regardless of profit, the sheep really paid him more than their expenses. We mention this instance to show that sheep may be kept almost anywhere with land enough and a little care.

As utility and economy, however, are to be connected with pretty much all of the animal kind kept on our country places, in selecting our sheep, we should keep those varieties only which are best suited to the

uses of the table. The common long-legged gaunt-bodied things which many farmers keep are worthless for the purposes we are discussing. They have little good flesh on their bones, their wool is of small value, and they are so restless and mischievous in jumping that they are little less than a nuisance anywhere. They certainly have no business on a well-kept place, and if nothing better than such brutes can be had, we would have no sheep at all. Yet there is no difficulty in getting sheep suitable for table uses, and of quiet habits, easy to keep, and beautiful objects to look upon. These are of the Long-wooled varieties, passing under the denominations of Cotswold, Leicester, Lincoln, or other foreign local names; or the Middle-wooled, commonly called Southdown. The long-wooled varieties are chiefly of one distinctive breed, with large bodies, compactly built, taking on heavy carcasses of flesh of extraordinary fatness, with a heavy fleece of long and rather coarse wool. They are clean-limbed, very white, with small, clean faces, quiet and gentle in habit, prolific in breeding, and take on flesh, when well fed, with ease and rapidity. Their flesh, too, is choice and delicate, but in full-grown animals, too much inclined to fat for stomachs any way delicate. The lambs, however, are superb, large, fat and delicious, and fit for the table at an early age. To those who like a large, strong sheep, they are the thing for your place.

The Southdown is a smaller animal, with a compact, well-knit body, dark brown, almost black face and legs, of beautiful proportions, with finer-grained, well-marbled flesh, and every way the *beau-ideal* of the mutton sheep. They are not so white as the long-wooled, but equally handsome and attractive in their appearance. They will live on closer pasture, and thrive, even where the others will barely live. They also mature rather earlier, are quite as prolific, and gentle in their habits. Our people, in reality, know little or nothing of the excellence of Southdown mutton. Its steaks and "saddles" are equal to the best venison, furnishing, moreover, its own gravies, which the venison, in most cases, does not; and for a "chop," nothing can equal it. The most sensitive stomach can digest Southdown mutton, and nothing is more nutritious. We Americans, in fact, know little about mutton as an *economic* food any way. The poor, flabby, stringy stuff mostly sold in our markets as mutton, in carcasses of thirty to fifty pounds weight, and by which we judge the general quality of mutton, is not the article furnished by the Cotswold or the Southdown, but little of which we get at all, while they who understand what *true* mutton is, and keep it on their grounds, or know where to procure it, enjoy its luxury in the highest perfection; and all country dwellers, with a little pains, can cultivate their own small flocks if they choose. It is not necessary here to go into elaborate directions for the rearing or care of sheep. Those who keep them can obtain all such information in detail by purchasing almost any of the popular works on sheep-culture at the bookstores,

or consulting some agricultural work in their own libraries.

We have treated the sheep in our remarks solely as an economical creature; but they have a value of another kind to many who enjoy the pleasures and recreations of country life, quite as attractive in their pleasant companionship, and as objects of ornament to the grounds. In a wide lawn or park, where the trees are grown beyond their reach, nothing lends a greater charm to a picture of innocence and repose than a group of sheep quietly reposing under a shade, or nibbling their food miscellaneous over the grounds. They amuse the children, and a pet lamb, next to the "pony," is the *summum-bonum* of a little boy's or girl's attachment. No creature is so confiding, so fearless, so companionable, as a pet lamb, and nothing half so innocent. Almost every year we have, either by accident or casualty, one or more of them, and when there are no young children to share their gambols, they follow our herdsman, Charley, and his little black and tan terriers, all over the fields, as he looks after his stock or other duties on the farm. We have frequent occasions to cross a considerable body of water adjoining the place, and as the herdsman often plays the oarsman in the Summer season, not only the dogs, but a lamb or two leap into the boat as it leaves the shore, and take their ride across the water and back in good companionship and great apparent enjoyment. They lie down together, drink their milk from the same dish, and are good friends everywhere, until arriving at the stage of sheephood in the Autumn, the "easets" are turned out with the flock, among which they soon find themselves at home, but ever retaining their confiding love towards their early protectors. Add the sheep to your other farm companions, if you can.

ROOT CROPS.

Are our readers fully sensible of the value of root crops? Are they mindful, *just now*, to have the ground well prepared for them, the seed well selected and properly sowed? Potatoes will undoubtedly be planted in abundance; but there may be a neglect of carrots, turnips, beets, parsnips, vegetable oysters, &c. Remember how valuable many of these roots are as Winter fodder for horses and cattle. They may be kept quite fresh through the Winter, by burying them in heaps out of doors, or by storing them in the cellar, in sand. We prefer, however, to leave a portion of our parsnips and vegetable oysters in the open ground till Spring: when newly dug from the garden, they have a freshness and sweetness which those housed in the cellar do not possess.

Now is the time to sow the seeds of all these crops, except turnips, which may profitably wait a few weeks. Sow thickly, in drills, thinning out the plants as they grow, leaving them plenty of room to develop themselves on every side. No success need be expected, unless the ground is made rich, and kept free from weeds throughout the Summer. No weed should be allowed to get more than an inch high; after that, the labor of exterminating them is almost doubled.

MECHANICAL PREPARATION OF THE SOIL.

NO. II.—ABOUT DRAINING.

As we have before stated, next to getting a soil into the requisite state of fineness, that it may furnish a suitable bed or medium for the roots of plants, we consider *under-draining* the most important auxilliary to success in soil culture. We hope to make this matter so plain as to carry conviction to the minds of all who read these articles. But we shall be met at the outset, as well as further on, with the objection that "it costs too much." Let us therefore first inquire whether it will be likely to **PAY** to expend ten, fifteen, or even thirty dollars upon a single acre, for it will in many cases cost the latter sum to *thoroughly* drain a single acre.

Take as an illustration a farm midway between the East and the West, and worth in the market, say only \$40 per acre. We will suppose an acre of this land with a slight manuring produces now an average crop of forty bushels of corn, worth one year with another, say 50 cents per bushel. The account with two acres will stand about thus :

Interest on two acres, at 7 per cent.	\$5 60
Taxes.	40
Planting, harrowing and manuring, at \$6 per acre, 12 00	
Planting, hoeing and harvesting, at \$6 per acre....	12 00

Total.	\$30 00
80 bushels of corn at 50 cents.	40 00

Profits on two acres.	\$10 00
Net profit per acre.	5 00

Now let us suppose that one acre be sold at the market price (\$40), and the whole proceeds be added to the remaining acre, in such improvements as draining, subsoiling, &c.; and suppose that by the improvement thus made the average yield of corn is raised to only 60 bushels per acre. How will the account then stand? As the land will be worked even more easily after the improvements, none of the expenses per acre for cultivation will be increased, except a trifling addition for harvesting a larger crop. The account will then stand :

Interest on one acre, costing \$80, at 7 per cent.	\$5 60
Taxes.	40
Plowing, harrowing and manuring, as before.	6 00
Planting, hoeing and harvesting.	6 00

Total.	\$18 00
60 bushels of corn at 50 cents.	30 00

Net profit per acre.	\$12 00
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Here is one-fifth, or 20 per cent. more profit on *one* acre than on *two* above. This is below the true estimate. There are very few soils in the country on which the average yield cannot be doubled by such an outlay in judicious improvements. According to these figures, 50 acres of the improved land will yield a profit of \$600, while it would require 120 acres of the unimproved land to yield the same amount of profit. We say nothing of the increased cost of fencing the larger surface, nor of the additional care, &c., required.

"But," says the incredulous reader, "this looks very well upon paper; to attain this end in *practice* is another thing." Well, our aim is to show that just such improvements are not only practicable, but that to engage in them is just what three out of four of al

the farmers in our country should do, and must do, if they will attain the highest success, or, in other words, cultivate their land to the greatest *profit*. And we will here remark, that precisely the same principles apply to small areas as to large—to gardens as well as to farms. But we ask no one to take a mere *ipse dixit*—a bare assertion. Let us look carefully and candidly into the whys, the wherefores, and the modes of doubling the product of our farms without increasing the after cost per acre for cultivation.

By a *thoroughly under-drained* plot of land, we understand one that has a set of open channels passing through it, from 2½ to 4 feet below its surface. These channels admit water into them throughout their whole length, and have outlets and a fall sufficient to carry off whatever runs into them. The channels or drains are placed near enough together, say 2 to 4 rods apart, to carry off all surplus water at any time falling upon the soil, or running into it from higher lands, and thus they keep the whole soil comparatively dry as low down as their bed (2½ to 4 feet from the surface). And, lastly, the lower ends of them are always open, so that when they are not filled with running water, the air can enter freely, and passing along them, circulate up through the soil, and escape from the surface.

Without stopping to inquire how to secure such channels or under-drains, of the best kind, and in the most economical manner, let us first inquire what will be their natural, obvious effect upon a soil thus fitted out.

1st. The soil will be kept free from standing water, and will be ready to work much earlier in Spring. When the frost is out of the ground, the surplus water will at once be drawn off, and the plow can be started. As the work can begin a week or two earlier in the Spring, it will be less crowded, and less man and team force will be required to till a given number of acres. With the absence of water, the soil will be warmed much sooner, and a week at least can be gained in planting corn, for example, which is very often enough to save it from an Autumnal frost, even if its growth were not more rapid on such a soil. The average gain of time upon at least three-fourths of farms, even those considered dry, will be equivalent to moving them from one hundred to two hundred miles southward.

2nd. Winter crops, wheat, rye and grass, growing on a soil thus kept comparatively dry, will not be killed by frosts of Winter. Why? Dry solid bodies, like soils, do not greatly contract and expand in freezing, while water, or wet soils, do expand greatly. As we have stated previously, eight quarts of water, or eight quarts of wet soil, will expand to nine quarts in freezing solid, while the expansion of the same amount of a merely moist soil is but slightly perceptible. It is this expansion and contraction of wet soils that breaks and tears the fibrous roots of wheat and grass, and Winter-kills them, or heaves them out of the ground. On the thoroughly drained soil, as described above, such effects will not be experienced.

3d. A thoroughly drained soil, with the water channels open for the circulation of air, is actually damper, or more moist, in the hot, dry weather of Summer, than those not so prepared. Why? For the same reason that the surface of a tumbler of cold water is covered with dampness on a dry, hot day. The air always contains some watery vapor, which is condensed upon a body colder than the air itself. This is the case with the tumbler of cold water. Now, as the soil is always colder than the air, in a dry, hot day, the air passing into the drains, and up through the soil, will give up its watery vapor and moisture to the cooler soil, just as it does to the cool surface of the tumbler. The water from this source alone is sufficient to sustain crops through the severest drought. There will always be a free upward circulation of air from the drains. The sun's rays heating the surface of the earth, will produce an upward current of air, just as surely as fire in a stove or chimney will cause the heated, rarified, lighter air to ascend, producing a "draught." In the drains, if they be deep, the air will not only ascend through the soil immediately above them, but it will spread out on each side, as the upward current is produced at every point of the surface, and thus draws the air from the drains laterally through every point. We thus see that a thoroughly drained soil is not only drier in wet weather, but is actually moister during a drought.

4th. We showed, in a previous article, (see page 54, middle column,) that most soils, not exposed freely to air, contain more or less of poisonous materials, in the presence of which plant roots will not flourish. The clearing out of water and the admission of air in its place, in an underdrained soil, is a direct method of destroying these poisons.

5th. In a soil thus freed from stagnant water, and from poisons, and rendered warmer, the roots of plants will go down much deeper, and spread wider, and not only be out of reach of drought, but also, from their greater extent, draw a much larger amount of nutriment.

6th. Manures are rendered more effective. When the lower soil is filled with standing water, much of that falling in the form of rain and snow runs off over and through the surface, carrying away large quantities of manure and vegetable matter. Witness the dark-colored streams during, and after a rain or thaw. Those muddy brooks and rivulets are loaded with rich manures. The Mississippi River annually carries and deposits in the Gulf near its mouth, a small continent of dark, rich mud, gathered from the feeding rivulets all over the valley of the stream. Our brooks, and rills, and ditches, exhibit the same thing on a smaller scale. But in an underdrained field water sinks down into the under channels, and flows out in a clear, limpid stream, like spring water. The soil strains or leaches out the fertilizing materials, and holds them stored for the growing crops.

We will not stop to discuss the effects upon climate and health produced by thus draining a farm, or a number of them lying

adjacent. Would not agues and chills and kindred diseases be far less frequent?

Other reasons for underdraining might be given, and will be noticed incidentally; but are not those named above enough to show why a field that will average but 40 bushels of corn per acre should average 60 bushels after simply draining it thoroughly? Is it not reasonable to suppose there would be even a greater difference than this?

Taking it for granted that this fact is established, we shall hereafter discuss two points, viz.:

1st. *What soils need draining?*

2d. *What are the best modes of performing this operation in different localities?*

CARROTS AS A FIELD CROP.

We have frequently adverted to this crop in our past volumes, and with every passing year of our experience with it, in the field, and in the root-bin, we are more fully convinced that the carrot is to be the root of the American farm. We are not certain but it will yet fill the place here which the turnip fills in England for stock feeding. The turnip sometimes does admirably with us, but can never be so uniformly successful in our hot, dry climate, as under the moist skies of Britain. The carrot can be planted earlier, and get a good start before the Summer drouth comes on. The yield, judging from our experiments, is fully equal to the yield of turnips under the same treatment, and the root is more highly relished by stock, and, we think, more nutritious. They are admirably adapted to feeding horses, and they keep much better in the Spring than turnips. We have frequently had them in good condition for feeding as late as June.

PREPARATION OF THE SOIL.

If large crops of twelve or fifteen hundred bushels to the acre are to be expected, good land must be taken, and it must be made still richer by large applications of manure. The wants of the plant are a foot of surface soil thoroughly disintegrated, and enriched with fine compost or well-rotted manure. Whatever be the depth of the plowing, the tilth of the soil should be very fine, and after the harrow has been used, we think it pays to go over the whole with a garden rake, removing all clods and small cobble stones. In smooth, sandy soils, this might not be necessary. But it facilitates after-culture very much to have a smooth surface. The seed should be put in with a seed-sower, and we have always found it advantageous to drill in manure with the seed. For this purpose we have used a good quality of dissolved unburned bones. The distance of the drills must depend somewhat upon the mode of culture you mean to pursue. If you rely upon the horse and cultivator, they should not be nearer than twenty inches. If you depend upon the scuffle-hoe for removing weeds, as we do, they may be planted fourteen inches apart.

CULTIVATION.

This should commence as soon as the plants are up. Push the hoe as near to the rows as possible, cutting up all weeds, and loosening the soil. When the plants are

two or three inches high, thin out, leaving them from four to six inches apart. It is a common error to neglect weeding and thinning too long. The hoe should be kept busy during the Summer, and the whole strength of the soil go to the support of the roots you mean to harvest.

VARIETIES.

We have cultivated both the white Belgian and the yellow Altringham, and have not been able to discover the advantage claimed for the Belgian, that it yields a larger crop. It grows more out of the ground, but has never grown as large as the Altringham with us, and the quality is certainly inferior. We decidedly prefer the long yellow carrot, and this with a careful selection of seed for a series of years will give crops large enough to satisfy any reasonable man. Do not fail to sow a piece of carrots the last of May.

POTATOES.

EXPERIMENTS WITH SIX VARIETIES.

Last season we made a careful comparative trial of the following six kinds of Potatoes, viz: Ash Leaf Kidney, Prince Albert, Early June, Sovereign, Mammoth Nutmeg and Dykeman's. Only a small plot was taken with a view to make everything as uniform as possible. The seed potatoes of each kind were selected as uniform in size, number of eyes, &c., as was practicable, and the soil all alike, and manured equally with a little bone sawings in the hill, and a subsequent uniform watering from the reservoir of house slops described in June last. Every care was taken to treat all exactly alike. They were planted May 12th, and dug October 2nd. Six hills of each kind carefully weighed gave the following result:

Ash Leaf Kidneys	12 lbs.	Sovereigns	94 lbs.
Prince Alberts	13 "	Mammoth Nutmegs	8t "	
Early Junes	12 $\frac{1}{2}$ "	Dykeman's	10 "

The cooking qualities were tried soon after digging and the following notes made:

The Kidney's.—Small size, resembling the Lady Finger variety; yellow flesh; free from decay; boiled mealy, even to the smallest.

Prince Albert.—Egg shaped; smooth skin; white; cooked quickly and were white and mealy when done; entirely free from rot. The most satisfactory of the six kinds.

Early June—Though planted too late these were doubtless too long in the ground and showed considerable decay; in size fair to large; though boiled quickly, they appeared water soaked.

Sovereign—Size above medium; round; yellowish white; affected with dry rot somewhat; boiled mealy; flavor pleasant; quite yellow after boiling.

Mammoth Nutmeg.—This variety, though lauded so highly by those having a monopoly of the seed at first, proved the most unsatisfactory of the six tried, both on account of small yield and rapid decay particularly after digging; medium size; nearly round in form; yellowish white color; the few sound tubers cooked and ate well.

Dykeman.—Medium size; round form; white with pink eyes; cooked tolerably mealy and of fair flavor.

On the whole we give the decided preference to the Prince Albert, and should plant this but from the present difficulty of obtaining seed.

TOMATO CULTURE.

The cultivation of this vegetable is comparatively recent in this country. Thirty years ago it was hardly known, except in the gardens of the curious, and among those seafaring people whose business had led them to the West Indies, and to South American ports. It has been much longer established in France and Spain, and was introduced into those countries from their South American possessions, where it originated. Thousands of acres are cultivated to supply the demands of our large cities, and so abundant is the yield of the vines, that in their season they are among the cheapest of vegetables. They are also made into catsup, pickles, sliced and dried for Winter use, and lately it has become common to seal them up in cans, in which they preserve their flavor admirably, and can be had fresh and good the year round.

There are numerous varieties, of which the large smooth red is the most popular for market, and the Mammoth much the best flavor for family use. This we have raised several years, and have frequently had them two pounds in weight. The plant will perpetuate itself in the garden, unless pains are taken to destroy it. But this is a careless method of growing them, and they deteriorate in size and quality, unless the seeds of the best fruit are saved and planted.

They are commonly forced by planting single seeds in pots in February, and putting them out the last of May, already in blossom. The pot is then well filled with roots, and as none are broken in turning them out, they push along rapidly, and give fruit in July. These potted plants are to be had of the market gardeners at this season, and a dozen of them will supply a common family.

For the main crop for pickling and for preserving in cans, seeds sown the first of this month will mature sufficiently early. When the plants are put out about four feet apart, they should have frequent hoeings, and the leaders should be headed in, to facilitate the forming and ripening of the fruit. Most of the blossoms are put out within two feet of the roots, and the shortening-in of the plant forces its energies to fruit-bearing. The fruit will be larger under this treatment, and will be some days earlier.

Some cultivators lay brush down for the vines to run on, and others tie them up upon a lattice. We think both these methods retard the ripening. The heat of the earth in August is of great service in maturing this fruit. The early plants should have a southern exposure under a fence or wall.

This crop when it first comes to market, bears a high price, selling for four and five dollars a basket. It soon falls to a dollar or less, and not unfrequently becomes a drug at any price. The enormous quantities that are now preserved for Winter use in cans, and manufactured into catsups and pickles, cannot fail to affect prices, and make them a paying crop.

HEDGES.

A good hedge is a good thing. Men have thought so for several thousand years. A great while ago, "a certain householder planted a vineyard, and hedged it round about." A long while ago, Homer tells us that "when Ulysses returned from Troy to his father Laertes, after many years absence, the good old man had sent his servants into the woods to gather young thorns for forming hedges, and while occupying himself in preparing the ground to receive them, his son asked him, "Why, being now so far advanced in years, he would put himself to the fatigue of planting that which he was never likely to enjoy?" Laertes, taking him for a stranger, gently replied: "I plant against my son Ulysses comes home." Hedges form an important feature in every ancient rural scene which painting or poetry has transmitted to us. The literature of England, especially, abounds in allusions to them.

We think hedges are as desirable now as they ever were. They have not yet been planted as extensively in this country as in Europe, partly because of the abundance and cheapness of fencing timber, and partly because hedge plants have not yet been found exactly suited to our soil and varying climate. But the time has now come when fencing material, both of wood and stone, is expensive, and in some parts of the country difficult to obtain. This is the case especially on the Western prairies. Wooden fences, moreover, are continually decaying, and require no little time and money to keep them in repair. For gardens and orchards, they are not a sufficient protection against thieving boys, pigs and poultry. They are objectionable, also, on the score of taste, while nothing is so beautiful for its purpose, as a verdant, well-kept hedge. "When a hedge is once grown," says Downing, "the small trouble of annual trimming costs not a whit more (does it not cost less?) than the average expense of repairs on a wooden fence, and then it is an everlasting fence, its freshness and verdure are renewed with every vernal return of the flower and leaf." Supposing our readers somewhat interested in the subject, we will now give a few notes on the plants principally used for hedges in this country.

HAWTHORN.—It was but natural that we should cherish a strong preference for this plant, associated as it has always been with the farms and gardens of our father-land. It is, moreover, a beautiful shrub, grows rapidly and compactly, and is so well armed with thorns that it answers, in this respect, most purposes of a strong fence. A full-grown hedge can be formed with it in five years. When planted in good soil, not wet, and not very rich, it grows well for several seasons, and promises to make a good hedge. But very often, after the labor of five or six years has been expended on it, and it stands a smooth, verdant wall, the just pride of its owner, insects fall upon its leaves and branches, or the borer attacks its roots, and it is virtually destroyed. The entire hedge may not perish, but it dies out in sections, leaving unsightly gaps here and there, to be filled up with still more unsightly boards, rails, or dead brush. We know of a single township where the loss of hawthorn hedges by a sudden attack of insects was estimated to have been greater than if all the dwellings had been attacked by fire. Beautiful and excellent as this plant is in most respects, we fear it cannot be relied upon as a permanent, unfailing fence.

NEWCASTLE, WASHINGTON, AND COCKSPUR THORNS.—These plants have been tried in various parts of

the country, and, in many places, are found to suffer less from the vicissitudes of the climate than the English Hawthorn. Yet the same radical defect attaches to them as to all plants of the same natural order (the apple, thorn, &c.), viz.: they are subject to assaults of the borer. Who among our readers will immortalize himself by devising some means of exterminating this pest?

BERBERRY.—This will make a tolerable hedge, if well-managed when young. It is hardly stubborn enough to turn cattle. Its tendency to sucker is an objection to it. The opinion, quite prevalent in some quarters, that it causes blight or mildew on grain crops growing near it, is groundless.

SIBERIAN CRAB.—This is a member of the apple family, and is often planted as a small ornamental tree, desirable both for its flowers and fruit. It is not a thorn tree, exactly, but when pruned, its branches become stiff and crabbed, so much so as to furnish a formidable resistance to the attacks of man or beast. It needs shearing only once in a year, and takes good care of itself the rest of the time. In the Spring, its flowers are quite ornamental, and in the Fall, its fruit is hardly less so.

CHEROKEE ROSE.—For the Southern States, this forms a good hedge. We have seen it when in full bloom, and shall not soon forget the splendid floral spectacle it presented, and the fragrance with which it filled the air. It is well equipped with sturdy thorns. Wo to the man or beast that attempts to get over or through a hedge formed of it! Unfortunately, it is too tender for Northern Winters.

HONEY LOCUST.—For a farm hedge, this will answer a good purpose. The principal objections to it are, that it grows too rampant, requires frequent pruning and splashing, and, at best, is coarse and straggling. For an outside barrier, where ornament is of no account, it is well worthy of trial.

OSAGE ORANGE.—Here, we have one of the most popular hedge-plants in America. It is clothed with glossy and beautiful foliage; it grows as freely as a willow, bears the shears well, and is armed with a regiment of thorns. It does not suffer from attacks of the borer or insects. It has been planted extensively at the West, and in most localities is said to answer every purpose of a farm-hedge. By many cultivators, it is feared that it will not prove sufficiently hardy for the Northern States. Above 40° or 41° North latitude, it is badly cut down in Winter. Being a native of Arkansas, this is not to be wondered at. On the other hand, it is contended that if the soil is well drained, the plant will prove hardy enough as far North as Vermont. What if the tops are a little frost-bitten, it does no harm, and only saves so much labor in the Spring pruning. Jack Frost works for nothing. Its friends are enthusiastic in its praise, declaring that, if well trimmed, it grows hardier every year, and that wherever the Isabella grape or the peach ripens, it will make the best hedge in the world: it is unrivaled in the density and stubbornness of its branches and thorns; the smallest bird cannot fly through it; horses, mules, cows, sheep, and unruly boys who wish an unbroken skin, are glad to keep on their own side of it. Our own opinion is, that it will prove a good hedge-plant for the Middle and Western States, at least in the milder portions of those States, but it cannot be relied upon for Northern latitudes.

PRIVET.—In this plant we have the material for making a very handsome screen. It grows easily from seeds or cuttings, is perfectly hardy, and free from insects. Its buds push out early in Spring, and its leaves hang on until mid-Winter, making it almost an evergreen. It lacks thorns, and therefore cannot be relied upon for an outside

fence. For ornamental purposes, to conceal wooden palings, or to divide gardens and pleasure grounds, it is very desirable.

BUCKTHORN.—Have we here a perfect hedge-plant for the Northern States? Some think so. That it is hardy, no one doubts. It grows in all kinds of soil; does not sucker; is not, to our knowledge, liable to insects or any kind of disease; grows rapidly, and yet needs clipping but once in a year, and it lives to a good old age. The only objection brought against it is, that it is not sufficiently thorny to turn cattle of every description. Indeed, it has very few thorns when young, but these increase with the age of the plant, and in proportion to the frequency of the shearing. The flavor of its leaves is so offensive to cattle, that they never wish to taste it a second time. Mice will not gnaw its bark. It grows under the shade and drip of trees better than most other hedge-plants.

EVERGREENS FOR HEDGES.—Our space will not permit us to speak in detail of these, nor of a few other deciduous hedge-plants sometimes used, such as the Beech, Hornbeam, Japan Quince, Prickly Ash, European Bramble, &c. There can be no more beautiful screen to divide ornamental grounds than the Hemlock; the Arbor Vitæ and Red Cedar are also excellent for the same purpose, but neither of them will prove a sufficient defence against cattle. If a thick row of these trees is strengthened by a wire fence on the exposed side, it will make a good protection. It is contended by some experienced hedge-growers from Northern Europe, that the Norway Spruce, planted two feet apart, and well sheared, will make as good a hedge as the Hawthorn. It is so used in Denmark. They are set out when young, one foot or eighteen inches apart, in single rows, and kept pruned to about five feet high, and they give perfect satisfaction. Why should not this plant have a fair trial in this country? It is now raised from seed, and imported in large quantities, and can be bought at a moderate price. If the American Holly were not so difficult to grow and manage, we should hope much from it as a hedge-plant. Its stiff and thorny leaves would make it impenetrable, and its beauty both of leaf and berry, in Winter as well as Summer, would recommend it to universal adoption. Experiments are now being tried with it in various parts of the country, and when the results are known, we shall hasten to chronicle them.

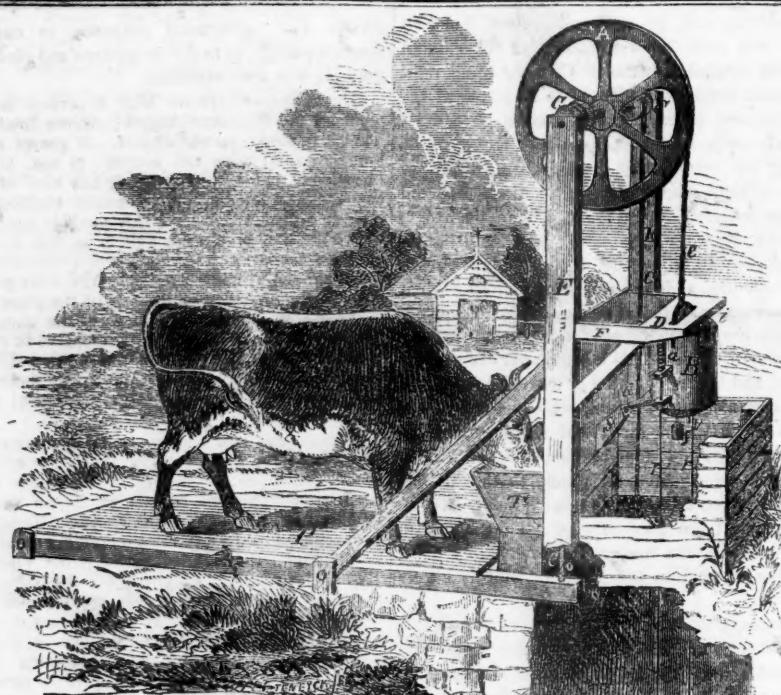
CLOVER-SEED—PLASTER.

Mr. Henry Bidwell, of Ohio, writes:

On the 5th of last July, I cut 15 acres of grass—red clover, with a sprinkling of Timothy—gathering 43 two-horse wagon loads, which we estimated at a ton each. The ground is a moderately heavy loam, which was seeded with clover and timothy, upon Winter wheat, in the Spring of 1855, and pastured after harvest. Last Spring, (1856,) I sowed four bushels of Plaster of Paris to the acre, as a top-dressing. One strip through the centre of the field, a rod in width, was left unplastered. On this plot the clover was scarcely two-thirds as large as on the other portions. The hay was stacked by itself, the outside of the stack being finished off with straight Timothy hay. We have just sold the hay, by weight, at \$9 per ton of 2,000 pounds, and received \$364 50 for the 40 $\frac{1}{2}$ tons, or \$24 30 per acre.

But I am not done with that field yet. The cattle were not allowed to run upon it, and in September I cut the after-math, or second-growth, for seed, and threshed out 58 bushels and three pecks of excellent clover seed, which we sold three weeks since for \$7 25 per bushel, or \$428, being equal to \$28 40 per acre, and making the total cash product \$52 70 per acre for one year. I value the clover straw left after threshing out the seed, as worth at least \$2 30 per acre, which gives a gross product of \$55 per acre. I estimate that \$10 per acre will cover the expense of hay-making, threshing the seed, &c., but, including the cost of the plaster sown, we will call it \$15 per acre, which leaves a net profit of \$40 per acre, equivalent to 10 per cent. on \$400. You can put this down as one answer to the oft-repeated inquiry "Will Farming Pay?"

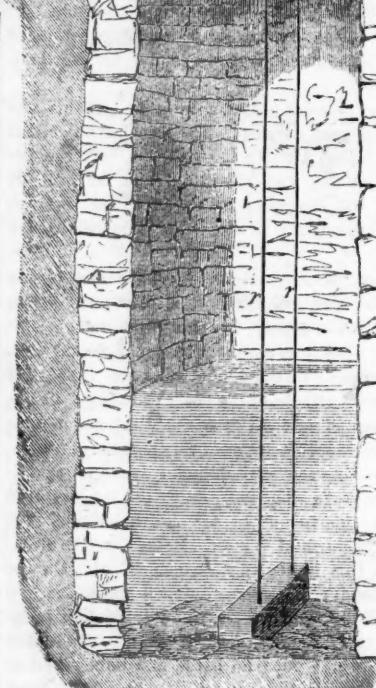
P. S.—I should add that on the portion left unplastered, the deficiency in the yield of clover seed was still more marked than in the first hay cutting.



AYRES' WATER ELEVATOR.

An apparatus adapted to wells or reservoirs, by which the various farm animals will draw their own water at such times and in such quantities as may be needed, is a thing much to be desired, and several attempts have been made to meet this want. We have until recently seen no one, however, which did not appear to have radical defects. An advertisement in our March number called our attention to a recent invention of Mr. Jared A. Ayres, a teacher in the Institute for Deaf Mutes in Hartford, Conn., and we have carefully examined a working model with much satisfaction. We present herewith an engraving which will show its form and mode of action:

The cow approaching the well depresses a platform which is attached by a small pulley to the axle of the large wheel A, turning it round and drawing up the bucket B. The bucket is guided by the small rods r r. The coiled spring a checks the sudden elevation of the bucket as it reaches the top. By giving a greater or less fall to the platform, or increasing or diminishing the difference between the large and small pulleys upon the same axle, the apparatus can be adapted to deep or shallow wells. A valve to the spout is opened by a little lever striking against the cross piece D. A valve in the bottom of the bucket admits the water from beneath as the bucket descends. One valuable peculiarity of this bucket is an arrangement by which the bucket is emptied of a part of its contents, proportioned to the weight of the animal pressing upon the platform, so that while a single sheep, for example, will raise say a quart, or two quarts of water, as may be desired, an animal weighing ten times as much will raise ten or twenty quarts. We have not space to note several other particulars, such as the arrangements to prevent any interference



from frost. We commend the apparatus to the attention of our readers. Further information and full particulars may be obtained by addressing the proprietor, Henry A. Dyer, Esq., at Hartford, Conn., as noted in our advertising columns.

ANOTHER JOB IN THE WHEAT FIELDS.

We are often tempted to head each page of our paper with the old-fashioned but expressive adage: "A stitch in time saves nine"—sometimes ninety-nine. This morning (April 13), in a "country ramble," we had occasion to cross a wheat-field, and instinctively, or perhaps from force of early habit, we pulled up and carried with us nine separate bunches or roots of "cockle," as we have been accustomed to call it. (We for-

get its botanical name, and do not know that it is called by any other than cockle from Maine to Texas.) The delay necessary to take up these nine roots may have been two minutes. The whole time occupied in crossing the field and pulling the roots certainly did not exceed nine minutes. Query. Would not the proprietor of that field—who, by-the-way, assured us that it was "very clean of foul stuff"—find it time well laid out to send a man or boy over the whole wheat-plot to pull up *all* the cockle roots, which are very easily seen at this season? We are sure it would. We have followed the plan from boyhood. When less than twelve years old, one part of our Spring work was to go over twenty-five to fifty acres of wheat and pull up all the cockle. As we sowed clean seed, three to four acres a day was not considered a hard task. Is it not worth a month's work of a boy to clear fifty acres of this pest? But at the same time with the cockle pulling, we carried a two-inch chisel fitted with a long handle, with which we dug up all the red dock roots we could find, and also any stray thistles and mulleins that showed their heads. With the narrow blade, it is easy to take out the deep roots of these plants without greatly disturbing the adjacent wheat roots. Wheat-growers, try this cheap method of clearing your fields, and you will soon find a decided improvement in the marketable quality of your grain. Nothing lessens the value of wheat more than those black little seeds of the cockle plant. Two or three successive weedings of the above kind will nearly eradicate this pest. But a word for the boys. Pulling cockle, like pulling potato vines, is hard on the back, though it operates in time better than any "strengthening plaster." Make the work for the boys as light as may be, and make it attractive. Offer the boys a premium of twenty-five cents per acre for entirely eradicating this pest, and charge them six cents for each plant found growing at harvest time, and our word for it, you will find the work well and cheaply done. We speak from experience.

DEAR SUGARS.

Every one is cognizant of the fact that sweetening of all kinds is enormously dear, so much so as to become almost a luxury. A large dealer in rhubarb, or Pie-plant, informs us that he is preparing for greatly diminished sales this season, because people cannot afford to buy the necessary sweetening for this plant. Fortunately the season has been highly favorable for making maple sugar in most parts of the country, and it is estimated that double the average quantity has been manufactured this year. But even this will afford but a partial relief, and the prospects ahead are little better, as the severe frosts the past month have materially diminished the prospects of the sugar crop at the South. We can but regret that the new Chinese Sugar Cane plant has not had one season more of trial. Were we fully confident of its success, we should urge its immediate general cultivation on a large scale. But this we cannot do. As it is,

however, we think it will be good policy for those who can do so without incurring risk by large outlay for seed,* or machinery, or loss of time and labor, to put in a half acre or more, and try it for molasses, if thought best in Autumn. See Mr. Hewlett's letter on page 38 of February No. We say if thought best, because arrangements are being made to carry on a few *early* experiments this season, the result of which will be known soon enough to give some information to the public. If not wanted for this purpose, the crop can be turned to good account for feeding purposes.

*See page 116.

HINTS ON CORN CULTURE.

What one gift of Nature to the American farmer can compare with Indian corn? It is the universal grain of our country, growing equally well in the narrow valleys of Northern New-England, and on the sunny plains of the South; on the eastern slopes of the Alleghanies, and on the shores of the Pacific. Cotton, rice and tobacco, are the staples of only a part of the States, and the sugar-cane only flourishes in the extreme South-west. The home of the grasses and of dairy products, is in the North, and here and there only thick-ribbed ice bridges the streams in Winter, and forms an article of commerce in Summer. But corn grows everywhere, is the indispensable article of diet in cottage and palace, from Maine to California. It is the most useful of all farm crops, and one of the most beautiful in every stage of its growth. Poet and peasant alike appreciate it, the one its leaves and tassels; the other its ears. It is the theme of economic essays for the political economist, and of song for the ballad-master. And now the time has come of which Whittier has told us in his admirable song of the "Huskers."

"When Spring time came with flowered bud,
And grasses green and young,
And merry bob-lins in the wood,
Like mad musicians sung,

We dropped the seed o'er hill and plain,
Beneath the sun of May,
And frightened from our sprouting grain
The robber-crows away."

Before the month closes, the seed of a harvest of one thousand millions of bushels of corn, worth half as many dollars, will have been planted. While the seed is dropping into the soil, we wish to drop a few hints into the minds of our readers concerning the planting and culture of maize.

TIME OF PLANTING.

It is a common error to plant too early. In all parts of the country, the seed often goes into the ground several days earlier than it ought. It is forgotten that this plant is of tropical origin, and requires a much higher temperature to germinate and grow than most other kinds of grain and vegetables. We have somewhere seen it stated that the kernel required a temperature of at least 55° to make it sprout and grow well. Whatever the particular degree of heat may be, we are confident that it is much higher than the soil generally is at the usual time of planting. As a consequence of too early planting, much of the seed rots,

and the farmer has the trouble of planting over again. The corn that comes up is stunted, a part of the roots rot, and the plant yields less fodder and grain than it would if seasonably planted.

In latitudes north of this, except in warm locations, both east and west, the last week in May is better than any earlier date to plant Indian corn. This is now our uniform practice in field culture. One of the best farmers of our acquaintance plants the first week in June, and though he uses the yellow dent variety, which is not early, he uniformly gets large crops. He claims that this late planting saves once hoeing, and that the corn comes up better, has a more uniform growth, and yields better.

DEEPER PLOWING

better defines the wants of the soil for this crop than any other single expression. Deep plowing would not answer in thin soils unless accompanied with high manuring. But every cultivator may safely go down an inch or two deeper, and if his soil be prairie or bottom land, he may as well plow four or six inches deeper than usual as two. The great error of corn culture, in the West, is shallow plowing, to which we may add continuing the crop upon the same land for a long term of years without rotation. There are tens of thousands of acres of corn land in the West that has never been plowed more than four inches deep, and the product is not over thirty bushels to the acre. The twelve inches beneath the four that have been disturbed is quite as good soil as the upper stratum, and only needs loosening to yield up its plant food. On many of these acres, ten, fifteen and twenty bushels, may be added to the yield per acre, by deeper plowing alone. It will cost but a little more to do this, and the increased yield is nearly all profit to the farmer.

The cost of cultivation, and the product of corn per acre, varies much in the several States. The average for the whole country, according to the last census statistics, was only about 25 bushels per acre—and for the Western corn-growing States not far from 27 bushels to the acre. The highest average, 40 bushels to the acre, was in Connecticut, a State in no wise remarkable for the fertility of its soil. According to statements in the last Patent Office Report, we find that some crops of this grain reached 130 bushels to the acre. Of 35 acres of Indian corn, offered in Massachusetts for premium, the average yield was 93 bushels per acre, and the average profit \$51 11 per acre. The largest crop was 138 bushels. Nineteen crops exceeded 100 bushels, and but two fell below 25 bushels per acre.

These are certainly good crops to bring from the sterile bosom of New-England soil, but they are far inferior to what might be raised upon the prairies and bottom land of the West, with the same skill in cultivation. These results are mainly owing to deep plowing and thorough mechanical preparation of the soil, manuring and after treatment. All these things can be more easily done on the smooth lands of the West than on the rough hard soils of the seaboard. Premium crops are reported in Kentucky of

190 bushels to the acre. Such crops, of course, cost a good deal of manure and labor, and are not to be expected on every farm. But do they not demonstrate the economy of deeper plowing and better tillage?

MANURING IN THE HILL.

We have no doubt that the main body of the manure should be spread upon the soil and plowed in. But the immediate wants of the seed kernel should not be overlooked. A great deal depends upon the early treatment of plants as well as of animals. A little stable manure in the hill furnishes food as soon as the plant begins to send out its roots. If this cannot be had in sufficient quantities, manure from the sty, the henry, or the privy, mixed largely with loam or muck, will do just as well. If only concentrated fertilizers are available, Peruvian guano or fine bone dust, a tablespoonful to the hill will have a very perceptible effect upon the yield of both fodder and grain. The former, even in so small quantities, should be mixed with loam or muck, at least one part to five of the loam, to prevent the burning of the seed kernel.

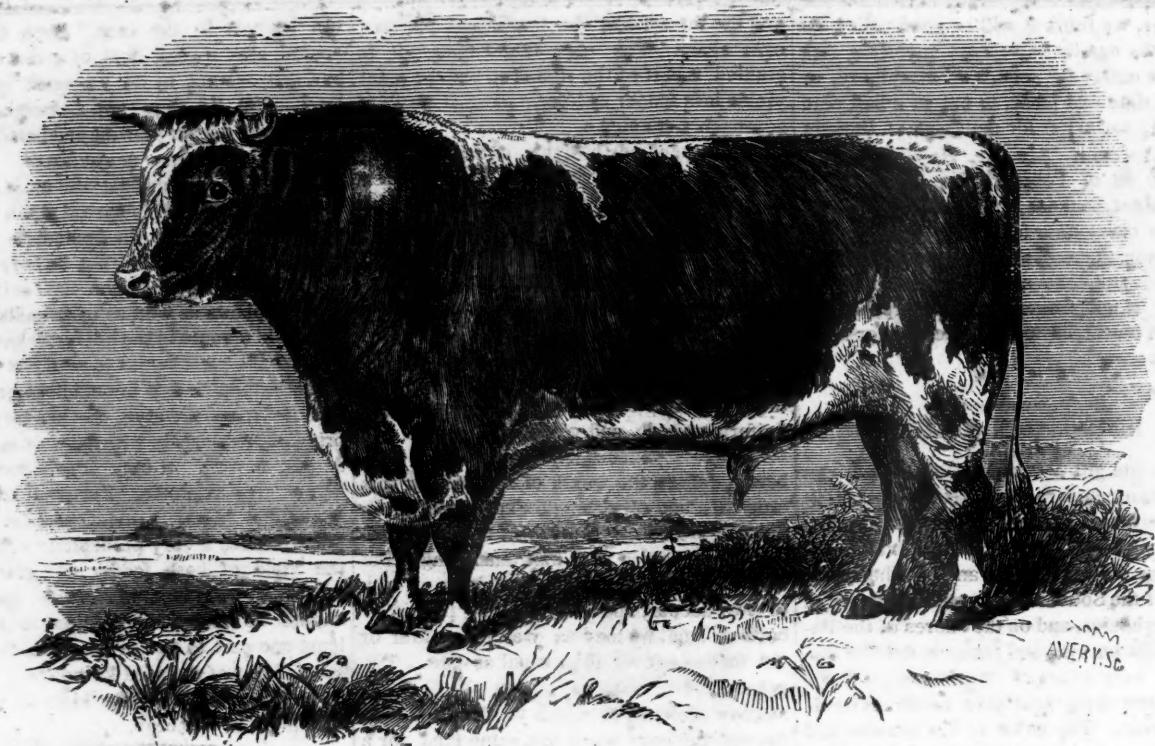
We shall have further hints on the after treatment of this crop.

A JOB IN THE GRASS FIELDS.

Go into any pasture field or meadow where cattle roamed last Autumn, and you will now find here and there miniature heaps of manure from six inches to a foot in diameter, and so thick that little or no grass will grow through them. While they lie undisturbed, they are worse than useless, as the washing have already enriched the soil directly under them quite enough for one season, and they occupy needless space. These should be scattered as a thin top-dressing, before the grass around them gets high enough to hide them or prevent their removal. Fit out the boys with an appropriate implement, and they will make "play-work" in knocking them about. The cheapest and most convenient implement we have

used is made by cutting off a piece of three-inch square scantling, say six to eight

inches long. The upper corners may be rounded a little. Bore a hole through this at such an angle that when the block lies flat upon the ground three feet in front of you, the handle will point directly into the hands. A broken rake handle will make a good staff. For men or large boys, a four-inch scantling may be used. Give the boys such an implement, which you can make in twenty minutes or less, and they will knock about the dung-heaps in double quick time, and thank you for the sport. We don't remember any other kind of work which we did not tire of in our boyhood days. This was always play, and we were always sorry when that old forty-acre meadow was finished. There is a species of skill required to hit a heap so as to give it a thorough breaking up and scattering at a single blow. It is the nearest to playing ball, and always being on the "inn" side of any kind of work we know of. Give the boys a chance—grass-fields ditto.



DUKE OF CAMBRIDGE.—(12746)

Calved May 28, 1853. Bred by the late St. George Gray Esq., and imported by the present owner, Thomas Richardson, West Farms, Westchester Co., N. Y. Pedigree: Got by Royal Buck, [10750]; Dam Rose de Meaux, by Collard, [3149]; g. d., Moss Rose, by Matchem, [2281]; gr. g. d., Poritia, by Cato, [1119]; gr. gr. g. d., by Jupiter, [342]; gr. gr. gr. g. d., by George, [273]; gr. gr. gr. gr. g. d., by Chilton, [136]; gr. gr. gr. gr. g. d., by Irishman, [329]; gr. gr. gr. gr. g. d., by B., [45].

TALKS ABOUT BEE CULTURE—NO. II.

Having encouraged our readers last month to give some attention to bee-keeping, as a source of pleasure and profit, we intend, as we have space, to give a few brief hints from month to month, which will be of service to those commencing the culture of this insect.

Those who own no bees must purchase either stocks that have been kept through the Winter, or new swarms. In the former case no time should be lost in removing them; let it be done before the trees blossom. Buy only strong stocks, which give every sign of activity on a warm day. At evening, or on a day when the bees are not stirring, turn the hive up side down, and quickly cover it with a coarse towel; tack this around carefully so that the air can get in, and no bees get out; and then carry the hive home, *with as little jarring as possible*, and put it into the place where it is to stand for the season. If you wish to begin with a new *swarm*, engage some beekeeper—on whom you can rely—to sell you an *early swarm*, and the first that goes out from the parent stock. Let him have your hive in advance, and put the bees into it at the proper time, and then you can move it as directed above. Swarms sometime issue in May, more usually in June, but the earlier the better.

One word as to hives. Beware of spending money on patent contrivances; it is often thrown away. We can do little to help the bees gather and secure their honey. They do that of their own accord, and as well in a state of nature as when domesticated.

By giving them *hives protected against the heat and rain*, we can save them trouble and annoyance; and so hives should be made with tight joints and be painted white, and should stand under the shade of trees. By movable boxes we can secure honey in a marketable form without inconvenience; and so the glass boxes described by Mr. Quinby, in our January number, will be found very useful, though wooden ones will answer. If we wish to study the habits of bees, it is necessary to get a sight of the inside of the hive; and for this *hives of a peculiar construction* are required; though a single light of glass in the side of a common wooden hive will teach some people what they never knew before.

If we wish to pursue the most complete system of management, and have entire control over every part of the hive at all times, a hive on Mr. Langstroth's plan is absolutely essential. But the simple hive described by Quinby, we venture to say, will be found as *profitable* as nine-tenths of those which are registered at the Patent Office. Sometimes a queen will be lost, and the stock will die; sometimes *too much honey* may be taken away in the Fall, and the bees do not survive the Winter; sometimes the *beemoth* gets access to a hive poorly defended and does a deal of mischief; but ordinary patents will not do much to remedy these difficulties, whatever may be said by men who have them to sell.

As this is the month for the blossoming of fruit trees, and for securing the delicious honey of the apple and the pear, it is well to give the bees access to at least one of the

spare honey boxes; and, as the weather becomes warmer, if they are found to be doing well, the other boxes may also be opened to them.

AMERICAN SHORT-HORN HERD-BOOK.

We learn that the third volume of this invaluable work to the breeders of Short-horn Cattle will be issued early this month. It contains about *three thousand five hundred* pedigrees of thorough-bred animals, nearly all of them never before recorded. It is gratifying to mark the progress which our neat-stock breeders throughout the United States and the Canadas are making in the introduction of the better races of English cattle to take place of the common and inferior animals which they have heretofore bred. It is estimated by Mr. Allen, the editor of the Herd-Book, that there are at this time not less than six thousand thorough-bred Short-horn breeding cattle in the United States and the Canadas, the aggregate value of which is upwards of one million of dollars at the lowest valuation, their individual value being from one hundred and fifty to five hundred, and in many cases ranging up to two thousand dollars each. Success, we say, to such noble enterprize in our American farmers.

MANURES AT THE WEST—MILDEW, &c.

To the Editor of the American Agriculturist:

Your articles on Manures and the Mechanical Preparation of the Soil are very valuable. In the February number, the question, "How do Plants Grow?" is answered very plainly, and there is no doubt of its truthfulness. You say: "Nothing

connected with improved soil-culture is more important to be understood than the best methods of saving and applying manures." This may be so with reference to the Eastern States, where the land has been cultivated for nearly a century or more. But in these Western States, there is not much attention paid to manures. The soil is generally good, and will bring three or four good crops of wheat one after the other without any manure, and by occasionally changing crops and *sowing clover*, the soil can be kept in tolerable good condition. If farmers would pay more attention to this, they could improve their crops from fifteen to twenty per cent. without the aid of special manures.

"Talks about Bee-Culture," in the April number, is also very good. There is little doubt that the culture of bees and the production of honey might be made a profitable business. It has never yet received the attention it demands in this part of the country. The deceptive promises of patented hives have indeed led many to abandon bee-keeping entirely.

Will not your correspondents give us their experience in destroying or keeping mildew from grape-vines?

JONAS SCHOLL.

FAYETTE COUNTY, Ind.

KEEPING HOUSE IN THE COUNTRY.

To the Editor of the American Agriculturist:

I have come to the conclusion that I have kept house just exactly long enough for my experience to be of some use to somebody. "How long?" you ask. "Thirty"—"twenty"—"fifteen years?" By no means. Exactly two years to day; and if anybody doubts my capability of giving any instructions now, let them attend to the following dialogue, which occurred not a minute ago, and showed me how incapable I shall probably be six months hence:

Bridget—(putting in her head from the kitchen)—"How did you say I was to make the pie-crust?"

Mistress—"Oh! very plain! as much flour as will make two pies; just lard enough to make it short; wet it with a little water; and—stay, Bridget—don't make it *too* short!"

On reflection, I felt proud of that receipt; it sounded as if I was a very experienced house-keeper indeed. Just such Mrs. A. and Mrs. T. used to give me when I went to them in my despairs, and they are called the best housekeepers in Windholme. No doubt Bridget, who is rather quick, will make very eatable crust when she has spoiled a dozen or two of pies. I learned the same way myself; but it is most probable I shall go out, when I have finished this sentence, and finding her standing by the pan, shall proceed to mix it myself, Bridget being none the wiser: some people think that the easiest way.

Old housekeepers are exceedingly apt to forget that they were once ignorant of many things which now seem to them so very simple and easy, they are not worth telling. May not one who has just threaded a rocky stream remember better the exact position of the rocks and quicksands behind him than one who long ago sailed out of sight in the deep water!—and so the experience of a housekeeper of two years, who remembers her own beginning, may be of some use to those who have had no experience at all, and who find, alas! that old housekeepers and receipt-books alike address their instructions to those who know something already.

Such, at least, is my opinion; and if the Editor of the Agriculturist thinks likewise, I may from time to time drop some crumbs to the young housekeepers among his readers, in the shape of

fragments from my diary, anecdotes of my failures, directions "how to do," and "how not to do it," and occasional reflections on things in general, which come under the head of "Keeping House in the Country."

EMILY.

WINDHOLME, 1857.

We shall be happy to hear from "Emily." The best "schoolmaster" we ever had was one not out of his "teens," who remembered the difficulties in his pathway, and taught us how to avoid them without *carrying* us through, as some instructors are too apt to do.—Ed.

BOOK FARMING IN HOOKERTOWN.

MR. EDITOR.—I suppose every man likes to know how the truck he sends to market suits his customers. At any rate that is the case at my house, where a good report of the butter and a calf for more is certain to keep my wife good-natured for a week. As her butter is tip-top, and I bring home the news once a week, she passes for a very amiable woman the year round. Now I suppose an editor may have some human nature about him, and may like to know how his wares suit the market, and what sort of influence they have upon the world.

There has been a great change up here in Hookertown, and all through Connecticut during the last four or five years. Since then we have got our State society a going, and new county societies have been started, and I guess I speak within bounds when I say that ten times as many agricultural papers are taken as there were five years ago. These things have had a mighty influence upon farming, and I should think in our town the garden crops had been doubled, and full twenty per cent. has been added to the crops in the field. Some folks have got to taking the papers, and reading them, that I should as soon have expected to see reading Latin. Seth Twiggs was in at our house last evening, and he was telling how he come to take the *Agriculturist*. I give you the story as he told it to me.

"I tell you what it is, Squire Bunker, that lot o' garden sass I see'd you putting into the cellar last Fall did the work for me. You see, I'd always thought that this book farming was the worst kind of humbug, leading folks to spend a heap of money, and to get nothing back again. I'd heard the Parson and Deacon Smith, and the young Spouter from Shadtown, (there was a twinkle in Seth's eye here, and a very grave look at Sally,) talking about guano, and what tremendous crops it would fetch, and then agin about phosphates and superphosphates, which was all as dark as fate to me. You see I thought them big words was all nonsense, and the stuff itself no better than so much moonshine on the land. The Deacon's crops, you know, have been amazing for some years, and then the strawberries last Spring, and that lot of sass, convinced me that there must be something about book farming arter all. So I went home and talked the matter over with my woman, what the minister said, and how the crops came in where they used the sub-sile plow."

"Well," says she, "Seth what is the use

of your always standing by, and hearing things said that you don't understand, like a stupid calf. Why don't you 'scribe and take them books?"

"Cause why? How can I afford it? I haven't quite paid for my farm yet, and the baby was sick this Winter, and the doctor's bill isn't paid. And you know, wife, we have always gone upon the principle that 'a penny saved is two-pence earned.' We can't spend a dollar for farming books."

"Well, Seth," says she, "never mind. I can raise the dollar. 'Where there is a will there is a way.' I can make the old shawl and bonnet do another year, and that will be ten dollars in your pocket. Everything that a farmer has to sell is high, at any rate we should think so if we had to buy it. I can remember well enough when butter was only ten cents a pound, now it is thirty, and many a bushel of potatoes you have carried to market for twelve and a half cents, now they are one dollar and more. Seth, if you really want them books, I'd have 'em any how. It wont take a great deal of land to raise an extra bushel of potatoes, and if you're put to it for help I'll agree to hoe 'em."

"Enough said," says I. "Woman I'm bound to have the books. So I sent a dollar down to Mr. Judd by the parson, the last time he went down to the City, and it want long before the January number came, as full of good reading as an egg is of meat. I had a regular set-to a reading on't, the first night, and I declare if it want smack twelve o'clock before I gin it up. I'd got along to that phosphate factory, when wife spoke out—says she: 'I thought them farming papers was all nonsense!'"

"Don't talk," says I. "You see this paper, wife, is on my side. It is showing up the humbug, and no mistake. And there is more humbug in the world than I ever dreamed of."

Upon this, Seth lit his pipe and vanished in smoke. Yours to command,

TIMOTHY BUNKER.

HOOKERTOWN, April 15th.

CREAM SOAP.

Mrs. G. B. Alvord sends us the following:

Take 5 pounds of washing soda; 3½ pounds clean grease; 5 pounds of lime, and 3 gallons of soft water. Slake the lime; dissolve the soda in the water, and stir the two together, allowing it to remain over. In the morning, pour off the liquid, being *very careful* not to let any particles of lime follow. Put it into an iron vessel where the grease has been previously warmed—boil over the fire for a few minutes, stirring it during the time. Take it off, and in a few hours you will have some nice hard or "Cream Soap," which, if used for washing or cleaning house, will be found to be a great saving of labor, and not injurious to the hands or clothes. Dissolve a piece of it, large enough to do your washing, in a quart of boiling water, making a suds, in which let your clothes soak all night. In the morning, wash them as usual. They will require very little rubbing. Pour a paifull of boiling water on the lime which remains. Let it stand all night; pour off carefully, and bottle it. This last is "washing fluid," which is valuable for cleaning casks, &c., using a cup full to a gallon of water.

DOUGLAS FIR—(*Abies douglasii*.)

A CHAPTER ON EVERGREENS.

Above we present a cut of the Douglas Fir, a native of California, introduced into Great Britain in 1826 from the Western Coast of America, by Mr. D. Douglas, from whom it received its name. This tree has flourished well in England, and is there very highly esteemed. The tree from which the above drawing was made grew from seed planted in 1828, and is now over seventy feet in height, and its branches extend about thirty feet on each side of the trunk. It is reported that in the native soil trees of this variety have been measured which were one hundred and eighty feet in height, and the spread of the branches near the ground one hundred and forty feet. The wood is of a yellow color, firm and heavy. The London Florist says of it: "It assumes an upright conical form, with numerous horizontal branches from the ground upwards, thickly set with foliage; the leaves are of a pleasing green color, and remain a long time on the branch, and thus form a dense mass of foliage, which adds much to its value as an ornamental tree; and when the young shoots (which are at first of a bright silvery green)

protrude in the Spring, the contrast between them and the older shoots from which they proceed, shed a varied mass of light and shade at once beautiful and striking."

Thus much for the Douglas Fir elsewhere. It would be a most desirable tree in this country, but some attempts to cultivate it here, made by a highly intelligent and skillful friend, indicate that it will not flourish in our climate. We shall hardly give it up yet, but so far, we cannot hold out any strong hopes that we shall be able to add this majestic tree to our list of valuable evergreens.

THE BEST EVERGREENS.

Below we give a list and brief description of some of the best evergreen trees, placing them in the order we would select them, according as we desired one, two, three or more. As a matter of convenience, and to save inquiries, we annex the price at which they are usually sold from first-class, well-regulated nurseries. The prices are a little higher in special cases where the trees are particularly symmetrical and well-formed.

1. NORWAY SPRUCE (*Abies excelsa*).—For all purposes, and under all circumstances of soil, climate and culture, this tree will give

better satisfaction than any other evergreen. Possessing neither the rich gracefulness of the Hemlock, nor the feathery lightness of the White Pine, it has yet a solid richness in its heavy foliage, and, when well-grown, droops with a graceful curve when grown singly; or if planted in masses, it forms the finest back-ground in the world against which to embroider all sorts of flowery deciduous trees and shrubs. It will bear transplanting better than any other evergreen; out of many thousands we have known transplanted, very few have been lost. A young Norway Spruce, in June, when its young shoots are just putting forth, and so weak as to droop gently over, is one of the most beautiful evergreens we know. It is also an excellent tree for a hedge, and when kept trimmed, will form a close, compact screen more quickly than any other evergreen. The trees are now quite common in nurseries, and can be obtained at reasonable prices. Last season we paid \$2 apiece for some very fine specimens, but those of the usual size for planting can now be had for 50 to 75 cents each. These are four to five feet in height. Smaller ones, say twelve to twenty inches in height, are sold at 10 to 20 cents each.

2. WHITE PINE (*Pinus strobus*).—This tree will come next to the Norway Spruce in value, although it will not so well bear transplanting. It never becomes rusty, is always noble in its stature, and its rustling branches produce that pleasant, peculiar sound, like the distant roar of the ocean. Its color is a bright, fresh green; it grows very rapidly, and it always gives pleasure. It bears the shears well, but is handsome as a single specimen. The usual nursery price is about 10 to 12 cents for each foot in height—the price varying with the beauty and symmetry of each specimen. After the above two selections, if variety is sought after, we would name the

3. AUSTRIAN PINE (*Pinus Austriaca*).—It has a coarse, heavy foliage, of robust habit; is a free grower, and bears transplanting very well. It contrasts well with the White Pine. Nursery price, say 25 cents per foot of height.

4. SILVER FIR (*Picea pectinata*).—This is a fine evergreen, of the Balsam tribe. It should be planted with those previously named, both for its intrinsic beauty, and to give variety. Nursery price about 31 to 37 cents for each foot in height.

5. HEMLOCK SPRUCE (*Abies Canadensis*).—This is the common Hemlock of the American forests, and it is one of the most beautiful evergreens, having graceful, pendant branches, and rich, dark green foliage. Unless in the best soil, in a rather moist situation, it does not grow very large. Nursery prices about 25 cents per foot.

6. WHITE SPRUCE (*Abies alba*).—This is transplanted with ease and safety. It is, like the Hemlock Spruce, a slow grower, but every way worthy of at least a sixth place in any collection of evergreens. Nursery price 25 to 30 cents per foot for well-grown specimens.

7. BHOTAN PINE (*Pinus excelsa*).—This

somewhat resembles the White Pine, having a more slender foliage, of a livelier and brighter green. It is a new pine, but is coming into general favor. Present nursery price about 75 cents per foot in height.

8. STONE PINE (*Pinus cembra*).—This grows very slow, and to only a moderate size, say nine to twelve feet in height, with a fine globular head composed of a dense mass of dark green foliage. It is a beautiful and attractive tree. Present nursery price 80 cents to \$1 per foot of height.

The *Deodar Cedar* was until recently considered one of the most beautiful and graceful of evergreens, but in this latitude the past two Winters have proved decidedly injurious to it. We have this Spring examined a large number of trees, and found them almost entirely stripped of foliage. At the South it will probably do well.

EVERGREEN SHRUBS.

We have given in a preceding article, a list of the best evergreen trees. The evergreen shrubs are very desirable, not only to mingle with the taller growing trees, but also to plant in small plots, especially where there is not room enough for those of larger size. We name those most desirable first.

1. Rhododendron *Catawbiense*.—This "tree of roses," as its name implies, is one of the most beautiful shrubs now grown. It is a complete evergreen, with somewhat glossy leaves of a thick texture, and bears large clusters of white, lilac, and crimson flowers, "each large enough for a lady's bouquet." Ours have been entirely unprotected through the Winter, and they now give promise of abundant bloom during this month. They were set out from the nursery May 10th last year, and produced several clusters of fine flowers in June. The plants are raised from the seed, but require several years to attain even a foot in height, so that it is advisable to procure them from the nurserymen who import the plants from abroad. Blooming plants, one to one and a half feet high, can now be obtained for 50 cents each, or 75 cents to \$1 for those of large size and special beauty of form and flower. A Western subscriber writes us that "upon our recommendation last Spring he procured half a dozen plants of Messrs. Parsons & Co., Flushing, N. Y., and he would not now part with them for the cost of the Agriculturist twenty-five years."

2. Siberian Arbor Vitæ (*Thuja Siberica*).—One of the best lawn plants. It grows very symmetrical. Price about 75 cents. The American Arbor Vitæ is also a valuable shrub, but has a less compact and beautiful head.

3. The *Cryptomeria Japonica* is worthy of a place on the lawn or grass-plot, as it is a beautiful and graceful plant. It proves to be less hardy than the first two, and does not endure our climate well. It does best on a good soil, with a dry bottom. Present price about \$2.

4. Golden Arbor Vitæ (*Thuja aurea*).—A superb plant, deserving the most conspicuous place upon the lawn. In habit it is a

dwarf, forming a smooth symmetrical cone. It was, however, somewhat injured with us last Winter. Price about \$1.

5. Small-leaved Cotoneaster (*Cotoneaster mycrophilla*).—A low growing, spreading shrub, bearing bright coral berries; very pretty upon a lawn. Price of this, and numbers 6, 7 and 9, about 50 cents each.

6. Tree Box (*Buxus arborescens*).—A neat shrub, valuable for its lively green, dense foliage and compact habit; a pretty object as a solitary specimen.

7. Japan Euonymus (*Euonymus Japonica*).—A desirable shrub, which will grow well in any ordinary soil, but proved rather tender with us during the last two severe Winters.

Broad-leaved Laurel (*Kalmia latifolia*).—One of the finest native shrubs; lively green foliage; flowers plentifully. Price about 75 cents.

9. Fiery Thorn (*Crataegus pyracantha*).—A showy, ornamental shrub, worthy a place in every collection.

Two other beautiful shrubs we should be glad to recommend, but they have not proved hardy, especially during the past Winter; we refer to the English Yew (*Taxus baccata*), and the Red Wood (*Taxodium sempervirens*).

A small sum expended in procuring a part or the whole of the above, or several specimens of each, with a very little labor in setting and taking care of them, will do much to adorn and beautify the rural home in Winter as well as Summer. They are obtainable at most of the large nurseries, and bear transportation even to a long distance.

RURAL ART ASSOCIATIONS.

In a certain town within the circle of our acquaintance, a society of gentlemen has been formed, with the name of "Rural Art Association," whose object is the promotion of horticultural knowledge and taste among its members, and the improvement of the town in rural embellishment. Monthly meetings are held at each others houses in rotation. The order of exercises is somewhat as follows: The first hour is devoted to supper and miscellaneous conversation; then, half an hour to the reading of an Essay by some member designated at the previous meeting: the remainder of the evening is occupied in a familiar discussion of some practical subject. This discussion is opened by some member appointed at the last meeting. He is allowed to speak twenty minutes. After his remarks, the Chairman calls upon all the other members by name, to express their views on the subject before the meeting, no one, however, being allowed to talk more than five minutes, except by special permission. Meanwhile, the Secretary is busy taking notes of the debate, for publication in the village newspaper. In this way, the benefit of these meetings is not confined to the members of the association, but inures also to the whole town.

In addition to this, each gentleman of the Society is required to pay five dollars annually, as a condition of membership. This furnishes a small fund, which is used in planting trees by the roadside in various

parts of the town. The Committee having charge of the tree planting, endeavor to induce all landholders to set trees themselves against their own premises; but where this cannot be done, they use the funds of the Society for that purpose. In this way, the streets of the town are becoming greatly improved. Last year, upwards of one hundred and fifty trees were planted by the Association, and this year, as many more will be added to them.

We commend these facts to the notice of our readers. Individual effort will often accomplish much toward the rural embellishing of a neighborhood. But it cannot do everything, it cannot compass a whole town, plant trees by the mile, and adorn parks by the acre. Societies like the above, combining the judgment, taste and means of a number of respectable citizens, will generally accomplish important results. Their influence on the members themselves must be exceedingly happy, and the towns where they are organized have reason to be thankful for their labors and their influence.

PLANT EVERGREENS THIS MONTH

Evergreen trees and shrubs may be planted at almost all seasons, but we decidedly prefer the middle of May in this latitude, and indeed anywhere north of Virginia. Further south, they may be transplanted a little earlier. As a general rule, the best time is when the soil has become settled and somewhat warmed, and before the dry season; or when the young buds are just pushing forth into a new growth.

In another article we have described some of the best kinds. No manure is required for evergreens. A good loam is the most appropriate. If a heavy clay or light sand, it is always better to dig out a space three to five feet in diameter, according to the size of the tree to be grown, and fill in good soil at least one foot, or, better, two feet in depth. In planting these, or, indeed, any kind of trees, great care should be taken to loosen the soil well, and have the holes so large that the roots shall not be cramped in the least, and also provide good soil for their extension. A little care of this kind will pay well both in the more rapid growth, and in the longer life of the tree.

DWARF PEARS AND GRAPES.

The subject of dwarf pears is now being thoroughly discussed in all the leading agricultural journals of the day. Some ten or twelve years ago, the most glowing accounts were sent over to this country of the success of Mr. Rivers, in England, and of several French pomologists, with dwarf pears, which awakened great zeal among the fruit growers on this side of the water. The old adage,

"Whoso plants pears,
Plants for his heirs"

was ridiculed as old fogeyism. Fruit may now be had in three years from the bud—at least a little! The trees should not be over-cropped when young! During the past ten years multitudes of trees have been planted,

and the result of the experiment has been anxiously waited for. Reports are now coming in from all quarters. On the one hand, they are unfavorable. Some persons, who were carried away with the mania, expecting almost fabulous results, and that without bestowing more care on their trees than on their current bushes, are now carried away with a furor of disappointment. They come down on the poor quince stock with a severe and almost wholesale denunciation. The quince, say they, being a native of the moist climate of Japan, is not adapted to the cold and dry climate of this country; it is not sufficiently allied to the pear to form a firm union of the stocks, and a healthy tree; it requires too much care and too high feeding for anybody but idle and rich amateurs. And then, the Spring pruning, the Summer pinching, the Autumn shortening and the root pruning; what busy man can look after all these things! Besides the borer at the root, the insects in the bark and on the leaves, the blight in its several forms, and other diseases cutting down multitudes of trees just as they begin to promise fruitfulness. And last, but not least, the scanty yield of those trees which happen to escape with their lives! Such is the lamentation of unsuccessful cultivators. Smarting with their disappointment, they have tried their best to write down the once lauded quince stock. And others who have been victimized, but could not write about it, have applauded the writers, crying out "Good! give it to 'em strong!" &c., &c.

Others report more favorably. Careful, pains-taking men, have had a measure of success, and hope for still more. Their advice is to use the Angers quince for stocks, and no other; to plant only those sorts of pears which have been found to succeed well uniformly on the quince, (and the number is quite small,) to bury the whole quince stock in setting out the tree, so as to enable the pear stock to get a slight rooting in the ground; to give the trees liberal culture, confining them to the garden, and giving up the orchard to standards. By so doing, they feel confident that success will follow.

But all this does not satisfy the majority of fruit-growers. It is well known that millions of dwarf pears have been planted within in eight years past, and yet the markets are not supplied, nor even the tables of the farmers themselves, in anything like abundance.

We have tried our hand in cultivating dwarf pears, but with such varied results that we can neither consent yet to give up our garden pets, nor do we expect to glut the market with our surplus products. We have also watched the paper controversy now going on, with much interest. The vigorous thrusts of the assailants have amused us, and not less the quick and dexterous manner in which they have been parried. But before the battle waxes hotter, we wish to interpose and suggest a compromise. In the hope of making peace we extend, not the Olive-branch, exactly, but something next to that, the Vine-branch. Or, to drop all figure, our counsel is not suddenly to abandon the culture of dwarf pears—the ex-

periment has not been fully tried as yet—but to enter gradually upon a more extensive culture of the grape. The pear requires more skill and more care in its management than the grape, it is subject to more diseases, and its yield of fruit is less certain. A grape vine, also, will begin to bear as early as a dwarf pear, and its vigor will last much longer. So many new and excellent hardy varieties have lately been introduced, that all who wish may now grow superior grapes for themselves. The fruit may be sold in market at highly remunerative prices, or made into wine, or it can be preserved for dessert in Fall and early Winter.

Throughout the Middle States, the Isabella and Catawba grapes will undoubtedly be the main reliance for some time to come. The Isabella can be ripened without difficulty as far north as Albany, Boston and Buffalo, and even further north if trained on the south side of a high and close fence, or on the same side of a house or barn. We have found, in our own experience, that its early maturity can be promoted by thorough pruning, and by keeping the canes on the ground until late in the Spring.

Our mode of procedure (in Central N. Y.), is this: Early in November we go over our vines with the pruning shears, shortening them to the top of the trellis, cutting back the annual growth to two or three buds, and removing all weak and half-ripened shoots. Late in the month the canes are loosened from the bars and thrown upon the ground. The refuse cuttings of the vines, and a little pea-brush are laid on the canes, and the whole covered loosely with a few old boards. This covering is designed not so much to keep the vines warm, as to preserve them in a uniform temperature until Spring is fairly open. Many of our neighbors leave their vines on the trellis, and they are often killed near to the ground. Our own are never injured by the severest Winters. We do not uncover them as soon as the first swallow comes. When Spring opens we remove the protection gradually, but leave the vines on the ground till all frost and cold winds are over, and the buds have become considerably developed. The canes are then carefully raised so as not to bruise the buds, and tied in their places. By *keeping them on the ground, and under the lee of a fence, a week or ten day's growth is gained over vines tied up to the trellis earlier and exposed to the cutting weather of early Spring.* This is a very important point, and we recommend it to the notice of our Northern readers. In tying the canes to the trellis-bars, we keep them one foot and a half apart. During the Summer little is done in the way of pruning, except rubbing off superfluous shoots, and checking the fruit spurs after the grapes become about the size of large shot. We never pull off the leaves from the vines to hasten the ripening of the grapes, for nature wants them to elaborate the *Juices* of the fruit. Nor do we pluck the clusters as soon as they become blue; they are not ripe until nearly black. A few frosts will not hurt them. Let them remain until fully ripe; then they will satisfy the most fastidious taste.

At another time we shall have something to say about the newer varieties of hardy grapes, and the best modes of preserving grapes fresh for Winter use.

GRAPE CULTURE—NO. V.

BY WILLIAM CHORLTON.

Now that the severity of the season is over, we may look among the vines and examine the effects of the extreme cold of the past Winter. There will be instances in very cold latitudes where the vines have excusably suffered, but in the majority of cases, the mischief has occurred through an over-damp or imperfectly drained subsoil. Those under glass may be injured from the same cause, and from over-rich, deep borders, which tend to keep the canes in a growing state, and supplied with too much fluid until the approach of Winter, leaving no time before the frost sets in for the drying up or ripening off of the woody fibre. The grape-vine, like all other plants, is composed of cellular organs, which, in a growing state, absorbs like a sponge all the moisture it can suck up, and if these are filled with fluid late in the season, they must evidently be ruptured by the expansion caused by freezing. Every cell thus burst is effectually destroyed. If a portion only be ruptured, there may be sufficient cells left to circulate the rising sap during the next growth, and so apparently recapacitate the whole body. The dead cells will, however, remain in the wood; and although there may be no appearance of permanent injury, they often produce gangrene, and frequently destroy the parts affected. A frosted limb in the animal body is a parallel case, the effects of which we all know. In indoor culture, some protection is afforded by the house, even though no fire heat has been applied through the Winter. True, we sometimes see examples where the exotics growing in the open air are nearly or entirely uninjured, leading us to infer that no covering is necessary. In the grapy, however, we must recollect that much richer beds are prepared for the roots, and, consequently, a large growth is produced, which requires longer time, and a dryer atmosphere in the Fall, to evaporate the surplus juices, to enable the vine to withstand any great amount of frost. In proof of this, we may refer to the hardness of the *Paulownia*, *Avantus* and *Catalpa*, in our own climate, where the wood becomes thoroughly ripened, and the moisture in the cells dissipated; while in most parts of Britain, with less severe Winters, and shorter and damper Summers, the same trees are killed back almost every season. These considerations show the necessity of covering the vines in houses where fire heat is not used.

I have spoken thus minutely of this feature, as many practical cultivators and amateurs would like a house of exotic grapes, providing they can succeed with them without the expense and trouble of artificial heat. Although fire heat is of service, temporarily, there is no actual necessity for it, as with a well-fitted glass arbor, attention to covering in the Winter, and not hastening the vines into growth in the Spring, great results may be accomplished, as I have proved during the last seven years, and will conclusively show, in due time, that it may be made a paying business.

OUT-DOOR CULTURE.

In the vineyard, and out-door culture generally, the vines will now begin to show their fruit, and likewise the most suitable branches for next year's bearing. Continue to disbud, or rub out, all that are superfluous. Those which are fastened to stakes will require, say two of the best lower shoots to be left. A sufficient number should be

retained upon trellises to fill up all vacancies, or furnish branches to be laid in at the distance of eighteen inches apart, as fruiters hereafter. Nothing deteriorates the quality of the fruit, or renders it subject to rot, more than the overcrowding of growing wood during the Summer. Every leaf should be freely exposed to the action of light, which cannot be the case when these young superfluous branches are allowed to "ride over" the whole surface of the plant.

COLD GRAPERY.

Some care is still necessary during the earlier part of the month where late frosts are apprehended. In such, keep the house cool for a few days, but do not neglect a free use of the syringe over the vines every mild evening. A liberal supply of water should be sprinkled over the floor of the house in the morning, to maintain a moist and genial, but not over-stimulating atmosphere, which will cause the buds to swell and burst with vigor. When the shoots are sufficiently advanced to show the best ones for fruiting, and also for next year's wood, all, excepting these, may be rubbed out. It is best, however, to leave an extra one on each spur, in case of accident, for, when fire heat is not used, the young shoots are quite brittle, and sometimes burst out before a sufficient amount of woody fibre is formed at their base to connect them firmly with the parent branch. For the same reason, they ought to be handled very carefully, and not be drawn down to the wires too soon. Towards the middle or latter part of the month, according as the locality is free from frosts, the house should be kept more closely shut, and the vines allowed to commence their growth in earnest. Let the temperature be gradually raised a degree or two each day, beginning with 70°, and increasing to 85°, in the middle of the day. Do not open the lower ventilators, as the cold air checks the circulation of the sap, paralyzing the action of the plants. Close the house early at night, use water freely overhead, and give the vines every chance to push into vigorous growth. The outside borders should also be attended to. We will presume that a mulching of manure was applied in the Fall, which should now be forked over, leaving the soil loose and open, to allow the air and sun to act upon the subsoil, thus invigorating the roots. If this covering of manure was omitted, apply it at once after lightly forked over the border. The Spring rains will carry the soluble fertilizing material to the roots as food for the plants.

THE FORCING HOUSE.

The earliest crops will now be "stoning," or in a more advanced state towards ripening. In fact, it is possible to have them ripe before this time, where no expense has been spared. When the last swell of the fruit commences, syringing overhead may be discontinued, and water entirely withheld inside of the house as the coloring progresses. At this time, a grape-vine will be maintained in a healthy state, if kept very dry. We are, however, sometimes compelled to apply water to prevent the encroachment of insects, but when this becomes a necessity, the water should never come in contact with the fruit, as it would cause some kinds to burst their skins, and all would be injured in appearance by the "bloom" being washed from the surface of the berries. For the latter reason, the bunches should not be touched with the fingers, or rubbed in any way, while hanging on the vines. As the side shoots continue to push fresh growth, the tops will need to be shortened in to one leaf above the former pinching; but in young canes of the present season, the top may be allowed to extend, and the laterals shortened to one leaf as they continue to increase.

The later successions of grapes will require the same treatment which was recorded for this in the last two months, and need not be repeated here. With the retarded crop, the atmosphere may be maintained as low as possible for some time yet, and corresponding small quantity of water used.

PROPAGATION.

If the "eyes" or buds were planted as recommended in February, and have been attended to aright, they will now be ready for potting off. Lift them carefully, place each separately in a pint pot containing suitable earth, give a sprinkling of water afterwards, and replace them in a gentle growing temperature, keeping rather close than otherwise for a few days, after which, they may receive the same treatment as established vines

DESTROYING THE BORERS.

DETAILS OF EXPERIENCE.

Mr. G. W. Harman, of Bennington, Vt., sends us the following valuable details of his observations and practice:

Various species of trees, both fruit and ornamental, are subject to the attacks of grub worms, which either kill, or seriously injure them. Among these worms are included the *Apple* and *Pear Borer*, the *Peach* and *Plum Borer*.

The *Apple Borer*, as usually observed in this vicinity, in the trunks of the *Apple*, *Quince* and *Mountain Ash* trees, is a white, fleshy grub, with a flattened body and large dark head, which generally enters the tree at or near the collar, just at the surface of the ground, where the bark is tender, and working longitudinally, at first, in the bark and new wood, eventually perforates the tree to the extent of many inches, up and down, or through the stem, diffusing a poisonous property, and causing its death. This grub is the larva of a brown and white-striped beetle, half an inch long; and it remains in this grub state two or three years, coming out of the tree in a butterfly form, early in June, flying in the night time only, from tree to tree, after its food, and finally depositing its eggs during this and the next month in the collar of the tree.

The *Pear Borer*, in appearance, is nearly identical with the *Apple Borer*, perhaps the same insect, but is essentially different in its mode of operation—confining its ravages to the bark and soft wood, and moving in a crooked or zig-zag course around the stem, cutting a channel that completely arrests the downward flow of the sap.

The *Peach* and *Plum Borer* are more round and fleshy than the former two, and make their lodgment in the collar of the tree. But it is in reference to the *Apple* and *Pear Borer* that I would more particularly speak.

To rid my orchard of these implacable enemies, I repair to the trees about the 15th of August, and kneeling upon the ground, with a garden trowel, remove the soil for a few inches around the stem, to the depth of three to six inches. With the back of my knife, I scrape the uncovered stem thoroughly, pressing upon every part of it, and several inches above the collar, to assure myself of its soundness, and if any yielding under the pressure of the knife is observed, I explore for the cause, which generally proves to be a *Borer*. I cut away the dead bark, and remove all the *chips* left by the *Borer*, sometimes following with chisel and mallet six or eight inches, until I find it, and having killed the insect, carefully clean out the whole wound made by it in the tree, taking care not to enlarge it. Ten or fifteen grubs are sometimes found in a single tree. Having completed the examination, I replace the soil, covering with it, if possible, all the wounds upon the stem. In

April, I repeat the examination, to kill such of the insects as may have escaped the former. An average or forty minutes to each tree is consumed in the two examinations.

Various expedients had been adopted to prevent the beetle laying its eggs upon the trees, some of them partially successful, but none completely so, until an experiment which I tried last season. It was this:

During the last week in May, I removed the soil from around the stems of my *apple*, *pear* and *quince* trees, to the depth of two or three inches. I then wound around each tree a large newspaper, placing the lower edge at the bottom of the cavity, and extending upwards the full length of the paper, tying the paper at the bottom and top firmly with twine, and loosely in two places between. I then replaced the soil. In about three weeks, and before the papers had rotted at the ground, I banked the earth around considerable portion of them, and repeated it about three weeks later. Early in July, I loosened the upper twine, to prevent its cutting the trees. About the 15th of August, I removed the papers from the *apple* and *quince* trees (leaving them on the *pear* trees all Winter), and, to my great joy, not a *Borer* was to be found in those which had been banked up in proper season: the others not wholly escaping. The reason was obvious. It was simply impossible for the beetle to lay its eggs where instinct teaches it to deposit them. The whole time occupied in these operations, including the examinations in August, averaged twenty minutes to each tree.

If our cultivators will pursue the course above indicated (first ridding their trees of all grubs now in them), they need complain no more of the *Borer*, the experience of one Summer confirming as an infallible preventative what would seem in reason to be such.

Covering the stems with paper, inasmuch as it shields them from the solar rays, is very beneficial, promoting a thrifty growth of the stems.

THE FARM VEGETABLE GARDEN.

We have often been greatly surprised at the general absence of a well-ordered vegetable garden in farming establishments; the more so, as it is a matter which addresses itself to the daily necessities of the household. A few vegetables are grown here and there about the farm, and these of the most ordinary kind. A thorough reform is needed in this respect, and we hope to see it become general throughout the land. Every farmer can almost, as well as not, place on his table daily the choicest delicacies of the season, and he ought not to feel satisfied without doing so. Let all who have not already a good vegetable garden, set apart a piece of ground for this purpose, and inclose it with a neat fence. It should have a warm exposure, be well drained, and it will pay well to trench it two or three feet in depth. If the surface soil is not so deep, it can be made so by the liberal addition of good loam: two feet in depth is none too much. Good old barn-yard manure must be used with a liberal hand: "as we sow, so shall we reap." Divide the garden into beds of proper size, and, when practicable, edge them with box; the beds should be large, rather than small, that the ground may not be wasted by unnecessary walks. Hot-beds, as described on page 63, are very useful. As permanent fixtures, do not omit rhubarb, sea

kale, and a bed of asparagus. The hot-bed frames, if provided, will furnish some nice early lettuce, radishes, cauliflower, cucumbers, &c., and will be useful in starting early cabbages, melons, &c., to be set out when the weather becomes warm.

In a garden prepared as above, one can grow, in great perfection, almost anything in the form of a vegetable, with proper care and skill. Some judgment will be necessary in planning a succession of crops. It is well to avoid growing the same kind of vegetable twice in succession on the same spot; but frequently two crops may be grown in one season on the same ground; for example, celery and late corn may follow early peas; turnips and early cabbage succeed lettuce and the first planting of bush beans; and experience will soon point out other examples of a similar kind. Procure none but the best seeds. It is better to buy some kinds of seed annually than to attempt to raise them, owing to their liability to become mixed; this is especially true of the melon tribe. If these are grown for seed, they must be kept widely apart. Whatever is grown, let it be of the best, and bestow sufficient care on it to bring it to the greatest perfection.

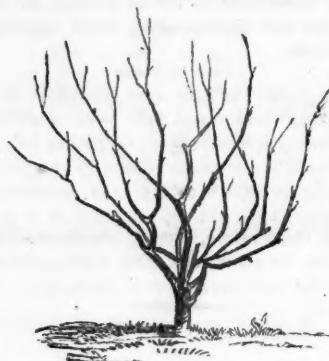
There is a wise saying, "A place for everything, and everything in its place." Then by all means let there be a place for the vegetable garden, and everything in it in its place there. Growing things here and there, and nowhere in particular, induces indifference and neglect, and begets habits at war with all system. As a general thing, farmers' tables will not be supplied with the choicest vegetable productions until they set apart a particular spot for this purpose. Land in the country can always be spared for a garden, and this should be made the most productive and profitable spot on the farm. A fair trial of a single season will demonstrate this.

EVERGREENS AT THE NORTH.

A Correspondent writes:

A good deal has been said in our horticultural journals, lately, about evergreen shrubs, and their desirableness as a Winter embellishment for ornamental grounds. For the most northern States, I do not consider them of much importance, because they are covered up or borne down by the snow during a large portion of the winter. And besides, those of much beauty are too tender for the extreme North. In the Middle and Southern States, they may be used to some purpose. Among the finest for those latitudes, I recommend the Mahonia, Native Laurel, Catawbiense Rhododendrons, Euonymus Japonicus, Tree-box, Evergreen Thorn, &c., &c. Certain hardy evergreen trees may be so pruned as to make a partial substitute for shrubs, even at the North. The Red Cedar, Hemlock, Savin, Siberian Arbor Vitæ, Swedish Juniper, and with them the American Holly and the Winter Berry to enliven the scene with their brilliant berries—these, grouped along the margin of the most frequented walks, or among other evergreen trees in view from the parlor win-

dows, will produce a cheerful scene throughout the dreariest days of Winter.



CURRENTS—PRUNING, &c.

On page 304 of Vol. XV, we detailed the method pursued by Mr. Henry Funnell, of Huntington, Long-Island, (N. Y.), in cultivating and especially in pruning currant bushes so as to produce a very superior fruit. Late in the Fall Mr. F. forwarded us specimens of his trees—for trees they are, though dwarf—which we planted out. We present herewith an accurate drawing of one of them as it now stands in our garden. It is five years old we believe; the main stem is five inches in circumference at the middle, and six inches high from the ground to the first branches. It will be seen that the branches spread out widely, leaving an open space in the centre, almost large enough to set in a barrel. This gives free access to air and sun light, and room for a large amount of fruit. The method of obtaining such a form is as follows: The first year cuttings one foot long are set into the ground to the depth of eight or nine inches leaving only three or four inches above ground. All the buds are rubbed off except the four upper ones. These shoot out side branches eight to twelve inches. In April, of the second year these side shoots are cut back to two or three inches in length, and two or three buds left upon the upper side of each from which new branches start upward, and outward, which are again pruned the next Spring. In this manner any desired form can be given to the head. From the ten or twelve upright branches thus produced, side shoots are continually starting out which are kept trimmed back to two or three inches in length, and upon these spurs is formed the best fruit. In our former article we described a single stem which contained 23 berries weighing over half an ounce (250 grains), and of superior flavor, with a solid pulp.

The method of culture pursued by Mr. F., is to set the cuttings early in the Spring, in a heavy loam, spaded two feet deep, with no manure added then or afterwards, save a free watering from time to time with the contents of a barrel standing under a sink spout, to which is added the soap suds on washing days. Great care is taken to keep the ground clear of weeds by frequent surface hoeings, and with one thorough stirring around the roots early each Spring.

CHAPTERS ON STRAWBERRIES.

CHAPTER V.

In our last we gave directions for planting, and named a few varieties as those most likely to give general satisfaction. It is not too late to plant any time this month; indeed, with a little care, strawberries can be planted at almost any time between April and November.

Some other varieties may be added to those recommended in last month's paper. The Crimson Cone is a good fruit, of medium size, and being very solid and high-colored is valuable for market. New-York City is mainly supplied with this variety. It grows vigorously with less care than any other, and being acid as well as solid, is superior for preserving. It is slender and conical in form, looks wild and rank as a plant, and succeeds equally well cultivated in beds or rows.

The Jenny Lind is one of the very earliest, the fruit of good quality and size, though not very productive. On account of its early habit, it deserves a place in a collection of a dozen varieties.

The Eclipse, a seedling, is a productive and beautiful strawberry of medium quality, but not solid enough to bear carriage.

The Scarlet Magnate is, perhaps, the largest strawberry that we have, except it be the new seedling of Mr. Peabody. This last, according to the drawings and statements made in reference to it, is a monster. The Magnate is only of medium quality, not equal to Hovey's Seedling, and but moderately productive.

We have tried Nicholson's Fill-basket. It does not succeed with us; all our plants burned out last Summer. This is the fate of nearly all European strawberries. In America we lose, from this cause, the Swainstone Seedling, the most exquisite in flavor of all cultivated varieties.

Strawberry beds should this month be thoroughly cleaned; and towards June, the ripening month, some hay or grass should be shaken round the plants to keep the fruit clean. The ground, too, by this means retains its moisture, and weeds are hindered from springing up.

We intend, during the fruiting season, to make notes of new kinds introduced, and give our opinion of their qualities, &c.

Since the above was in type, we have received from Mr. Peabody, of Columbus, a box of fine plants of his new strawberry, referred to on page 44, (Feb. No.) The plants, which came in excellent order, we have put out in three localities, to give them a variety of soil and exposure, and shall watch them with considerable interest.

TIME OF PRUNING.

To the Editor of the American Agriculturist:

I notice much diversity of opinion in regard to pruning. As respects apple and cherry, experience teaches me that when blooming or in full flower, the branches, if smoothly cut, heal over perfectly sound. The tree is then in full vigor, and able to protect itself, while the leaves and blossoms shelter the wounds from sun and wind. The objection to Winter trimming, especially of

large limbs is, that the March winds check the end of the limb from one half to two inches in depth, allowing not only water to stand in the crevices, but also forms a reservoir for the rising sap, which it is well known becomes a strong acid, producing rapid decay, and cannot easily be arrested until it reaches the root of the tree. Nine-tenths of the old orchards have been ruined in this way.

Most if not all shrubs should be pruned when in the growing state. Shoots or suckers will not put forth as in the case of Winter pruning.

Respectfully yours,
GEO. NEWELL,

NEW-YORK, April 13, 1857.

THE CABBAGE PATCH.

That was a memorable reply which the old Roman Emperor, Diocletian, after he had abdicated, made to Maximian, when he proposed to him to resume the crown :

"Would to God you saw the cabbages I am raising! You would never want me to be Emperor again!"

He had a magnificent palace at Spalatro, commanding a fine view of the sea, and surrounded with rich vineyards and corn-fields. He had a rural population for neighbors, and from being an anxious Emperor he had become a jovial cultivator of the soil. In the fertile borders of his vegetable garden, and amid the straight rows of his Drumheads and Savoys, he found a satisfaction that the serried ranks of his army had never yielded him.

Whether the eulogy of the cabbage by the old Roman has hallowed it in the esteem of great men, we are unable to say. Certain it is, that it has become a great favorite with our ex-Presidents—the type of elegant leisure and enviable seclusion from the cares of state. To grow cabbage, is the goal of an honorable ambition among men of distinction, and among those without it. Crowned heads have added new laurels to their brows, gleaned from the cabbage patch; and uncrowned ones may gather from its humble borders something more coveted than laurels both by the titled and by the obscure.

Cabbage growing is a money-making business if skilfully followed, and as such we have a few words to say in behalf of this humble plant. The time of sowing Early Yorks is of course past for this season, and if that has been neglected, your only resource is the market gardener, or some thoughtful neighbor, who has the coveted plants in just the right condition. For love or money you may procure enough of these for a family supply, and by setting the first of the month, you will have fine heads early in July.

But you are still in ample time for the main crop of cabbages to be harvested in August and September, and for the Winter crop to be gathered two months later. Select a good rich border of garden mold, and sprinkle on a half bushel of ashes to the square rod. Rake them in thoroughly and sow the seed, either broadcast or in drills, four inches apart. The object of the ashes is to destroy the larvae of the insects that are prone to prey upon the *Brassica* tribe of plants.

These will be well up and fit for setting by the last of the month. When these plants are removed, it may be immediately resown to furnish plants for the last crop.

The cabbage is a rank feeder, and wants a deep rich soil, if you mean to make it pay. Avoid all stye manures, or composts into which they enter. The cabbage rarely escapes club-foot where this manure is used. It delights in a fresh soil, and we have found great benefit in bringing up the subsoil in old gardens where this crop is planted. For the small varieties, the rows may be twenty inches apart, and the plants fifteen inches in the row. The large varieties, like the Drumheads and the Bergen, want nearly twice that room.

When the plants are set out, they must be cultivated diligently. Once a week is none too often to hoe them. This makes them grow rapidly and obtain a larger size. The cabbage is a good succession crop to early vegetables, or by planting the early and late varieties in alternate rows, two crops may be gathered from the same soil.

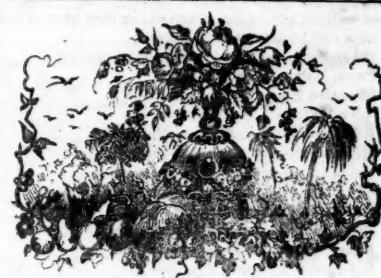
LIMA BEANS—HOW TO START THEM.

The season is too short in many parts of the Northern states, to get a full crop of these beans, without assisting Nature a little in the Spring. This may be done, by raising the temperature of the soil, with warm fermenting manures, or by gentle forcing in a hot-bed.

A well trenched soil, filled with fermenting stable manure, is several degrees warmer than a soil compact and undisturbed. The last week in May is early enough to plant them. Put down the poles four feet apart in the rows running East and West, and three feet apart in the rows running North and South, and incline them a little to the South, to give the vines the full benefit of the sun. Make a slight elevation around the poles, and plant the beans with the eyes downward. Six beans to the hill are enough, and if all grow, pull up two of the poorest plants. This mode will enable many to raise this delicious bean, who have not hitherto succeeded with it.

Still further North, they may be cultivated by starting in a gentle hot-bed, or in the south kitchen window in a box. Take turfs from any swarded meadow, or road side, about a foot square, and three inches in thickness. With a trowel mark off the turf into smaller squares of about three inches upon a side. In each one of these little squares insert two beans, and then lay the whole sod upon your hot bed, or box in the window. In a short time the beans will come up, and the little roots will take possession of the sod. When the weather becomes warm in early June they may be removed to the open air, and set out around the poles.

The middle of May, is early enough to start them in this way. Whether you use the hot bed or not the ground should be deeply worked, and made rich, that the beans may grow rapidly and mature early. This is unquestionably the best of pole beans, and no farmer, whose latitude will allow him to grow it, should be without it. In selecting seed, buy only those that have *indented* sides.



FLOWERS—ANNUALS.

There are a number of annual flowers which are indispensable to the garden. Some entertain the idea that these are of little beauty and less value, simply because they are annuals. This is a great mistake; many of them are of great beauty and rich fragrance, and are among the chief attractions of the green-house and garden at all seasons of the year; and in the latter they make a gay show, even during the hottest Summer months. They have an additional value from the fact that, by being planted at intervals, they may be brought into bloom at any and all seasons, and thus, in one sense, become perennials. They are of every diversity of color and form, and thus all tastes may be suited. They are also of the easiest culture, and may be purchased for a trifling sum, so that even the poorest cottager may gather around his humble home some of these beautiful gifts of nature. Their habits, too, adapt them to every kind of soil and exposure, and there is no part of the garden where some of them may not be planted with advantage and effect. Some may be grown in clumps, some in beds, some against walls and frames, while others require to stand alone to develop fully their fair proportions and beauty. Such are some of their good points and qualities briefly told. The genera and species are very numerous, and they are natives of all parts of the world.

We shall now give a select list from such as we have grown; we could greatly extend it, but it is sufficiently large to meet the wants of all. To prevent disappointment, the seed should be purchased of reliable seedsmen. Of Balsams, Panzies, Aster, &c., only the choicest should be bought, even at a higher price.

The following nine may be grown singly or in clumps, if in clumps it will only be necessary to thin them out to a few inches apart.

Sweet Alyssum. (*Alyssum maritimum*.)

Chinese Pink. (*Dianthus annuus*.)

Mignonette. (*Reseda odorata*.)

Tassel Flower. (*Cacalia coccinea*.)

Candytuft. (*Thlaspi var.*)

Globe Amaranth. (*Gomphrena globosa*.)

Love Grove. (*Nemophila in var.*)

Linanthus. (*Splendens*.)

Gypsophila. (*elatior*.)

The following two may be grown in clumps or in beds, and in either case need only to be thinned out a few inches apart:

Trailing Sanvitalia. (*Sanvitalia procumbens*.)

Portulacas. (*Portulaca in var.*)

The following three are climbing plants, needing the support of the trellis or strings. It is better to plant them at once where they are to remain, and when up, thin them out:

Cypress Vine. (*Ipomea quamoclit*.)

Umbellifer Ambrosia. (*Ambronia Umbellata*.)

Morning Glory. (*Ipomea in var.*)

The following 23 take up, individually, much room, and require to be grown singly, otherwise their beauty is not seen. Three or four seeds may be planted together, and

when well up, all but one removed; or they may be sown in drills and transplanted afterwards:

Cleander leaved Clarkia, (*Clarkia necrifolia*.)
 Poppy, (*Papaver superbum*.)
 Sensitive Plant, (*Mimosa sensitiva*.)
 Adonis Flower, (*Adonis astivalis*.)
 Blue Ageratum, (*Ageratum Mexicanum*.)
 Mexican Poppy, (*Argemone grandiflora*.)
 China and German Aster, (*Aster in var.*)
 Lady Slippers, (*Balsaminus hortensis in var.*)
 Golden Bartonia, (*Bartonia aurea*.)
 Branching Larkspur, (*Delphinium consolida*.)
 Pansy, or Heart's Ease, (*Viola tricolor*.)
 Variegated Zinnias, (*Zinnia in var.*)
 Dwarf Nasturtium, (*Tropaeolum minus coccineus*.)
 Dwarf French Marigold, (*Tagetes nanissima*.)
 Catchfly, (*Silene in var.*)
 Jacobea, (*Teneo elegans*.)
 Variegated Schizanthus, (*Schizanthus in var.*)
 Phlox, (*Phlox Drummondii*.)
 Ice Plant, (*Mesembryanthemum crystallinum*.)
 T'w weeks Stockgilly, (*Matthiola annua*.)
 Red and White Lavatera, (*Lavatera trimestris et alba*.)
 Blue Bottle, (*Centauraea cyanus*.)
 Marvel, of Peru, or Four o'clock, (*Mirabilis jalapa*.)

Annuals are planted in various ways; the best two are in straight drills, or in circles—we prefer the latter. A stick will answer to make the drills; the circular drill, however, is best made by the rim of an inverted flower pot. The label is to be placed in the centre. Very neat labels can be made of shingles, which split easily and regularly. A little white lead rubbed on the labels will prevent the names from being obliterated by the weather. It is sometimes recommended to write the names on a slip of paper, the latter to be placed in a stick with a slit in it, but it is more troublesome than the plan mentioned above, is not as neat, and the paper is generally destroyed with the first rain. By occasionally reading the labels you will soon learn to call the plants by name. This will greatly increase the pleasure of growing them.

The soil should have a light dressing of well-rotted manure, be broken up finely and finished off with a fine rake. Then plant the seed as directed above to the depth of an eighth to half an inch, according to the size of the seed; in fact, the smallest seed, such as *Portulaca*, should be left nearly on the surface, with just covering enough to prevent them from being washed away. The plants will come up thick, and must be thinned out, which should be done as soon as they are out of the seed-leaf, (the leaves which come up with the seed.) When about an inch or so high, those that require it should be transplanted. Do this, if possible, during rainy or cloudy weather. If the sun should come out hot, some of the plants may need to be shaded a little by placing over them a flower pot or a piece of paper. This need not be done unless they wilt a good deal, and then only for a few days. Larkspurs, and other tall growing plants, must be carefully tied to stakes as they grow.

Some of those marked to be grown singly and in clumps, may also be grown in beds, planted from six to twelve inches apart. Among the most suitable may be mentioned *Phlox Drummondii*, a lovely flower, always in bloom, and of diversified colors; *Gomphrena globosa*, an old favorite of much beauty and of long duration—if made into bouquets they make beautiful ornaments for the mantle during the whole Winter; *Portulaca*,

a very showy flower, of a low growing habit; *Sanvitalia procumbens*, a trailing plant, with showy yellow flowers, and several others. The seeds of all the plants named in our list may be planted in the open ground as soon as the weather becomes settled and warm. All of them, too, might be started in hot beds, but this is a trouble which comparatively few can take. When it can be done, it insures an earlier bloom.

In conclusion we would again urge our readers to make a selection of Annuals, and cultivate them with care, being assured that the pleasure will be more than a compensation for the small amount of labor required.

THE WINTER CHERRY (*Physalis Peruviana*).

Our article on page 35 has called forth a great number of inquiries, and we have received a few seeds from four different sources, all of which we shall cultivate as an experiment, and we hope to raise and get from other sources a quantity of seed for our next Annual Distribution, which will embrace a large variety of field, garden and flower seeds. The seeds have come to us under various names, such as *Physalis Peruviana*, Ground Cherry, Winter Cherry, Strawberry Tomato, Gooseberry Tomato, Shaker Gooseberry, Grosenberry, *Physalis alkekengi*, &c. The last name is the one given in botanical works, and it is so called by Gen. Mazaros, who brought over some seed from Hungary, where it was introduced originally from Arabia. This last is now cultivated by Edward Mitchell, Esq., of Flushing, N. Y. In reply to our letter of inquiry, we received the following from Mr. Goodsell, which came too late for our April issue:

.... The plant is an annual, and propagates itself from seed. It has synonyms, though its proper English name is Winter Cherry. I have heard it called Ground Cherry, and in one instance Strawberry Tomato, yet there is another species of the same genus, which I have heard called Strawberry Tomato, but which is not worth cultivating. The plant grows to the height of two to three feet; stalk branching; leaves entire, and pubescent; fruit inclosed in an inflated calyx, pale yellow when ripe, and about the size of a Catawba grape.

This plant, as an edible, is of recent introduction in this vicinity, although I cultivated it twenty years since in my garden as a botanical specimen only, not knowing that the fruit was of any value. So it was with me in regard to the tomato: I had cultivated it many years before I tasted the fruit, or even heard of its being eatable, and now a man would be considered as lacking taste who should neglect to cultivate them for his table.

Since I commenced answering your letter, I called on a friend for the seeds I send you, as I had distributed every seed I had to applicants. They are merely dried in the fruit, whereas mine were washed out. This friend told me he had another variety (species), which were larger, but not as good. From his description of it, I concluded it was the *Pensylvanica*. This he called the *Gooseberry Tomato*.

N. GOODSELL.

NEW-HAVEN, Oswego Co., N.Y., }
 March 19, 1857.

A lie has no legs, but scandal has wings.

THE GOOSEBERRY.

In England, this is one of the most popular of the small fruits. The climate of that country is admirably adapted to its growth, and unusual care is bestowed upon its culture. The extraordinary specimens we read of are grown by professional gardeners, and even mechanics who emulate each other in competing for the special prizes offered for this favorite fruit. The plants are highly manured; only a few berries are left on each, and all the appliances of skill and experience are resorted to to bring them to the greatest size and perfection. It is the spirit of emulation which has elevated plant-growing to its present high standard in England, and we should be glad to see more of this feeling here.

It must be conceded that our climate is not the best adapted to grow the gooseberry in its greatest perfection: it is not sufficiently humid. This fact, however, instead of operating against the culture of this fine fruit, should stimulate our ingenuity and skill. Some persons love to battle with difficulties of this kind, and they are the ones who meet with success. The gooseberry would, however, soon degenerate, in size at least, even in England, if submitted to the same treatment that it receives here. It shares the same neglect as the currant, but bears it less generously. Its culture, without doubt, is more difficult than the currant, and disappointment often follows our best directed efforts. Plans and remedies without number have been submitted for consideration, all promising more or less success. We do not purpose discussing these various plans, but submit our own mode of culture, which is simple, and has afforded us a good measure of success. Mildew, the most formidable obstacle to success, has given us but little trouble under our present treatment; but we have occasionally had the berries on the south side of the bush literally "done brown" by the sudden appearance of a hot sun after a few days of cloudy or rainy weather. This, however, chiefly happens when the berries are near maturity, and may easily be prevented by a slight temporary protection or shade.

In planting, we dig a hole about three or four feet square, and about two feet deep, adding to the soil thrown out about one-third the quantity leaf-mold from the woods, and the same quantity of old, well-rotted manure, the whole being thoroughly mixed together. In filling up the hole, previous to putting in the plant, press the compost gently with the feet, to prevent the ground from settling too much afterwards. Procure young plants grown to a single stalk, and rub out the eyes from the roots and main stalk up to the point where you wish to form the head; say from six to twelve inches. In planting, spread out the roots, and press the earth around them. The after-treatment consists in pruning, manuring, and keeping the ground open and free from weeds. The pruning may be done during the winter, or left till early Spring. The fruit is borne on wood of the previous year's growth, and on old spurs;

and for this reason it is not advisable to shorten-in the young wood, except to preserve the form and symmetry of the plant; but all branches that interlace and cross each other must be cut out, and the general pruning so conducted as to keep the head of the plant well open for the admission of air. When pruning, look for caterpillar's nests, and destroy them. We prefer to apply the manure in the Spring, and fork it in at once, using old, well-rotted barn-yard manure. The plants must be looked over occasionally for insects, and the more frequently the ground is stirred the better, if the roots are not injured. If large berries are desired, thin them out when quite small. We prefer an open exposure rather than against a fence, which is no place for the gooseberry; a little sunshine and free air will do it more good than harm.

Mulching of various kinds has been recommended to prevent mildew, but it is not always effectual. It is, however, useful in other respects, though we have not used it on the gooseberry in many years. Our present plan has succeeded without it.

The Lancashire varieties of red, white and green, are those usually grown under the names of Crown Bob, Whitesmith, Roaring Lion, &c. Houghton's Seedling, an American variety, has thus far escaped mildew. The berry is small, but the bushes are very productive, and the variety desirable.

The Dahlia.

We are of opinion that the Dahlia is usually planted too early. The florist is compelled to force his roots in order to furnish a large number of plants for sale. The amateur is under no such necessity. We will suppose the plants remain in a warm cellar, where they have spent the Winter. In the Spring they should be removed to a cool place, securely protected from frost. When they begin to grow take them out, if the weather is pleasant, and cover with a little earth. When the shoots have grown a few inches, the roots should be divided, so as to secure a tuber, or a portion of a tuber, to each shoot. If the tuber is large, cut away one half of it. They may then be planted in the spot where they are to grow, or put in pots to retard them. We do not plant till about the first of June, and some of the best Dahlias we ever grew were not planted till past the middle of that month. The proper flowering season of the Dahlia, is the Fall of the year, when the air is moist and most congenial to its habit. If planted too soon, it makes a strong growth before midsummer, insects attack it, and the strength of the plant is exhausted before its proper flowering season arrives. Very few perfect blossoms are seen in midsummer.

The soil of the Dahlia should be enriched by a little well-rotted manure; if the soil is sandy so much the better. The Dahlia requires some pruning. Not more than one shoot should be allowed to grow from the same tuber, and the side shoots should be trimmed away from the lower portion of the stem, say from six to twelve inches from the ground. If the head of the plant sets very thick, some of the shoots should be thinned out. If large and perfect blooms are desired, the buds must be thinned out while they are small, removing the weakest, and generally leaving only one or two buds on the same stalk. The soil should be stirred occasionally and kept free from weeds.

The Dahlia is a splendid flower, and deserves a prominent place in every garden. It blooms, too, at a season of the year when the garden has lost many of its attractions, and it can ill be spared.

We append a list of 24 choice varieties—13 fancy and 12 plain: FANCY—Beauty of Bath, yellow; Pre-eminent, dark plum; Le Phare, scarlet; Oriflamme, orange; Belle de Paris, blush; Gem, cherry; Gem of the Grove, dark maroon; Grand Duke, bluish lilac; Hypolite, plum; Sir C. Napier, red; Summit of Perfection, plum; Blanchefleur, white. PLAIN—Admiration, white and scarlet; Constancy, striped tip; Gloire de Kain, maroon, striped and spotted; Imperatrice Eugenie, white and purple; Triumph de Rouen, amber, white tip; Beauty of the Grove, buff, edged with crimson; Elizabeth, lilac, white tip; Floral Beauty,

crimson, shaded with pink; Mrs. Hansard, yellow, white tip; Roi de Pontille, crimson, tipped with peach; Madame Zahler, buff, with crimson tip; Miss Bentworth, blush lilac, shaded with crimson.

The Chinese Potato (*Dioscorea batatas*). HOW IT STANDS COLD WEATHER, AND HOW VALUED IN EUROPE.

Those who have read this Journal for two years past know the course we have advised in regard to this plant. We were, we believe, among the first to warn the community against investing their money in it, and we are sorry to say that our predictions in regard to it are proving true. We would much prefer that the plant should have turned out to be all its friends claimed for it. During the past month, in one of our "country rambles," we chanced to visit a plot in Flushing—the largest in the country, we believe, and as the public had been invited to examine it, we took the liberty to spend an hour with the workmen who were digging the roots which had been left in the ground over Winter.

On the plot referred to, which was planted last season, we found the tubers varying in size from a pipe-stem to an inch in diameter at the bottom, with an occasional larger one. The majority of them were not larger than our fingers. It has been claimed for the *Dioscorea* that it would endure the Winter, and continue to increase in size from year to year. We found, however, that very many of them were badly affected by freezing. Some were killed outright, while more of them were frost-bitten in one-half to three-fourths of their length or more. The frozen part resembled a common potato frozen.

This plot had been supplied with a coating of manure during Winter, and we were informed that this had smothered them, and been the cause of rotting. On returning home, we examined some roots in our own garden, which had been left in the ground over Winter. They were along the east side of a board fence, and somewhat protected by this, as well as by a snow-drift for most of the Winter. On digging them, we found all below five inches from the surface in a sound condition, but the parts above this depth were decayed. Some common potatoes left in the same ground, within three inches of the surface, came out sound. From these observations, and what we hear elsewhere, we think it about settled that they are, to say the least, no hardier than our common potato. We do not yet perceive that they have any special claims upon public attention, beyond mere novelty.

There is still much said of their wonderful success, and the high value set upon them in Europe. On this point, we present the following extract from a letter just at hand, from Wm. H. Brewer, Esq., a reliable scientific gentleman, who is pursuing investigations in agricultural science in Germany and elsewhere. His letter is dated at Munich, Bavaria, April 1, 1857. He says:

"...A word on the *Dioscorea batatas*. I have made inquiries when practicable, and find the opinion of it about the same that prevails among some of you in America. Professor Smith, Professor of Botany, and Director of the Botanical Gardens at Heidelberg, informed me that there, both in the Scientific Department and in the Heidelberg department of the Gardens, they had entirely failed to get such brilliant results as were heralded from France. He was not inclined to think the plant of any considerable practical value for Germany.... Professor Von Martius, perhaps among the first botanists in Europe, tells me that the experiments in the Botanical Gardens attached to the University here (Munich) were attended with similar results, and he was of the same opinion as Prof. Smith."....

Iowa—Seeking Western Homes—Good Advice.

From a communication to the Christian Advocate and Journal, by Rev. T. Spicer, referring to questions asked by his Eastern friends, we make the following extract:

"The State of Iowa is very extensive, its soil is very fertile, and its population is rapidly increasing. In 1840, its population was 78,000; it now exceeds 600,000; its increase last year was 224,000. It is estimated that last year, Iowa produced not less than 31,162,632 bushels of corn, and 2,014,388 bushels of potatoes. In answer to questions respecting the propriety of removing from the East to settle here, I have only to say; that to a young man, or a man in the vigor of life, who has a family of sons, who are inclined to agricultural pursuits, I think this country, especially Iowa, offers great facilities to become comfortably situated, and even independent; especially should he happen to locate near where cities or villages may hereafter spring up. But such must calculate to endure some privations for a few years to come."

"But I think a man somewhat advanced in life, and that has no sons, or whose sons are not inclined to agriculture, who has a good farm in the East, and is doing

well in his business, may as well stay where he is. These immense prairies are generally very fertile, and the agriculturist who understands his business, and properly attends to it, may become wealthy. He and his family may for a season feel lonely; but in all probability, in a few years there will be gathered around him all the comforts and conveniences of his early Eastern home. If he is religious, let him be careful to carry his religion with him, and be sure to maintain it, when he gets there. Let him "Watch and pray, lest he fall into temptation." I have understood that many remove into the Western country, who, not finding any organized Church, and but few professors of religion around them, forsake the assembling of themselves together for worship, and soon backslide. Let Christians beware. If you go, "Let your light shine, that others may see your good works, and glorify your Father in Heaven."

NOTICES TO CORRESPONDENTS AND GLEANINGS.

Ten articles from regular and transient contributors and a multitude of notes, answers to inquiries, gleanings, &c., are in type, waiting room. We wish to have all leading articles on hand a month, when practicable. We now go to press much earlier than formerly, and need time to prepare and arrange articles; and then the printers, stereotypers, folders, stichers, mailers and mail carriers must each have a little time to get the paper into the readers hands. Do not put off your contributions, queries, &c., until just as the paper is going to press.

Cucumber Bugs.—Dr. Heckerman, of Tiffin, writes: Most gardeners are very much annoyed by these bugs, which prey alike upon the cucumber, melon, pumpkin and squash—the latter being its favorite. Various plans have been devised for their protection, such as soot, &c. A method which I have practiced with nearly entire success, is to form a mixture of equal parts of finely ground black pepper and wheat flour, and dust the plants, while the dew is upon them with this mixture, using an ordinary flour or pepperbox. It is a fact generally known, that black pepper is so obnoxious to most insects, that few will approach or stay in its presence. The object of the flour is to combine with the pepper, and with the water or dew to form a paste, which will adhere to the leaves for many days unless washed off by heavy rains; in which case the application should be renewed.

Hen Manure.—B. S., of Dutchess Co.—Poultry droppings, are without any doubt exceedingly valuable on almost all crops. The best three available manures, in our opinion are *finely ground unburned bones*, Peruvian guano, and hen manure. The latter if kept dry, pulverized and thoroughly mixed with four or five times its bulk of muck or earth, with or without plaster, is capital for putting into the hill with any seed. As a general thing we would advise the use of poultry droppings, directly around the seed. The best results we have witnessed were from adding to corn and potatoes a mixture of one bushel hen manure, one bushel plaster, one peck of air slaked lime. These were worked well together only as fast as wanted for use, and a large handful scattered in each hill and the seed put upon it and immediately covered. Pulverize this and all other manures as much as possible, so that they may be diffused evenly through the soil. It may be sown broadcast as a top-dressing, or be dug in around the roots of trees and plants. It can be economized by putting it with the seed, but can hardly come amiss, used in any manner.

The manureal value of Guano and Yellow Lupine for barren Soils.—From a letter from our Waterloo correspondent, S. W., we make the following extract: "The Count de Goucy, in a letter to B. P. Johnson, Secretary of our State Society, says: Within the last few years by the aid of Guano, four villages near Cloes, on the Rhine, with a population of 4,000, have become rich, expending now about \$100,000 a year for guano alone. (?) The Baron also tells us that another means of growing a crop on poor soils heretofore left uncultivated, from very barrenness, is to grow the Yellow Lupine, (I suppose *Lupinus latens*). This plant has been cultivated of late with great success on the sterile wastes of Prussia, producing not only forage, but grain, containing as much azote (nitrogen) as Horse-beans. I think this species of *Liguminosae* would be a desideratum on the thin sandy soils of Long-Island, and New Jersey. It will grow on a soil too poor for clover, it undoubtedly collects more food from the atmosphere, and may supply the place of clover as a manuring crop."

Chip Manure.—H. H. Dean, of Vermont, inquires what he shall do with it. It will hardly come amiss for any crop. It is a good absorbent for other manures in the stables, yards and privies. It is a very good dressing for fruit trees, and for grass land.

Guano Experiments.—J. Moseley, of Mass. We shall give the substance of these in a subsequent number.

Grafting Wax.—R. S., Wisconsin. Two pounds of resin, one pound of beeswax, with tallow or lard enough to temper it to suit the season. Stir well until all is melted. Work with the hands until white.

Hot-Beds.—“Juvenile Gardener” asks if hot-beds will succeed when made in the ordinary manner, *without* the sashes. The heat will not be retained without some covering, and that covering should admit light. The sash is also necessary to shield the young plants from outside frosts and storms.

Berry Plants from Seeds.—J. N. R. asks if Strawberries, Blackberries, Cranberries, &c., are produced from seed true to the varieties sown. They are not, although finer varieties are generally produced by seeds from choice kinds. It is better for cultivators, generally, to obtain plants of known varieties, rather than attempt raising from seed. Cranberry growing from seed, is answered by a noted experimenter, who says: “But raising vines from seed is uncertain, hazardous, and if you succeed you have a long time to wait for the fruit.”

The Permanent Qualities of Flowers.—F. Schreiner, of Moss Grove, gives us the case of a Fox Glove, which changed the color of its flowers in the course of seven years from purple to white. “Our beautiful purple fox gloves are gone, and there has not been in all that time another fox glove, except our own within a mile of us. How do you account for it?”

This is what professional gardeners call a sport. There is a disposition in all flowers to be affected slightly by external causes, climate, soil, cultivation, manures, &c. But some plants have this disposition much stronger than others. The fox glove probably has it more than the Dahlia. We would suggest changing the fox glove to a new location in the garden to see what the result of fresh soil will be.

Corn for Fodder.—M. H. P., of Columbia Co.—We believe the general experience is in favor of planting or sowing in *drills* in preference to broadcast. If sown broadcast, it must be thin enough to allow the growth of much foul stuff, or the corn will not flourish, and then the weeds cannot be kept down by hoeing. Make the soil as rich as may be convenient, and put in drills 2½ or 3 feet apart, and give it as thorough cultivation as for a full crop of ears. The seeds may be put in say one or two inches apart, according to the richness of the soil and the probability of suckering. Corn planted in this way yields a great amount of valuable fodder. Many persons are intending to try a plot of the new sugar cane for the same purpose. It bids fair to excel corn, as the stalks are much more solid and full of saccharine matter, which is of a fattening nature. We shall see how this is the present Summer.

King Philip Corn.—L. Lewis, of Cayuga Co., says of this corn: “It is the best I have ever raised after an experience of fifty years with various kinds. It ripens early, has a small cob, large kernel and ears of good size. It ears well, and if planted three feet by two and a half a part, and well taken care of, it will yield 80 bushels to the acre. The seeds he inquires for he can probably procure in Auburn.

Wheat Culture.—D. W., of Washington county, Pa., wishes information on this topic. As he is a new subscriber, he has not read our former articles. At the appropriate season, we shall discuss this subject at length. Any hints from our readers thankfully received.

Silk Worm Eggs Wanted.—J. Laverell, of Bridge Val ey, Pa., inquires where these can be obtained. We do not know. Will some one having them please write him direct, and also inform us.

Saving and Trying New Seeds.—J. D. H., of Cold Spring Harbor, writing upon this topic, says: “In May, 1855, I received from a friend in Europe only four Sorghum seeds. These I planted, and raised seed enough to plant half an acre in 1856. One-half of this I fed, and from the remainder made 70 gallons of good molasses or syrup; sold \$130 worth of seed, and have enough left with which to plant twenty acres this year.” Not a bad speculation on four diminutive seeds in two years.

Parsnip Wine.—Mr. Jno. Clarkson, of Milford, Pa., informs us that he makes a very good wine from parsnips by the following process: Let the roots remain in the ground all winter, if you like; by all means let them be well frosted. In the month of March, clean a quantity, cut them fine, and add one quart of water to each quart of cut roots. Boil them 1 to 1½ hours. Press out the liquid and strain it. To each gallon of the fluid thus obtained add 2½ lbs. of coarse sugar, stirring it well, and when sufficiently cool set it to work with yeast smeared over a piece of toasted bread. After 12 to 18 hours, put it into casks preserving sufficient to fill up the casks from time to time. When done working, close the casks tightly; let it stand until the following March and then rack it off into bottles, adding to each bottle a lump

of sugar of the size of a walnut. When sufficiently fine you will have a very delicious wine. Some use 4 lbs. sugar instead of 3½ lbs., and also use a lemon; but this is merely a matter of taste.

Dried Apples, Pies.—“A Buckeye Girl” sends us the following recipe: Let those who have the great privilege of drying their own fruit, prepare their apples for pies before they are dried. Free them from all skins and cores, then slice and spread on platters, and they will dry in a hot sun or by a cooking stove in less than twenty-four hours, without losing their natural flavor. Apples dried in this way will cook ready for use in a half hour, and with the usual seasoning of sugar, spices, &c., we have a pie that would take a pretty smart epicure to tell from a green apple pie, and besides, it is a saving of time, which is a great desideratum in the endless round of cookery.

Soap and Candle Making.—We have valuable communications from our fair Kentucky correspondent, “Mollie Broom,” on these topics, which, with others of similar character, we shall find room for, now that Spring work in the garden and field will not demand so much space. We shall gladly surrender a due share of these pages to instructive hints and suggestions on household labors.

Beef or Pork Pickle.—An Illinois clergyman, furnishes us the following one, which he thinks can’t be beat for goodness and cheapness: To every 2 gallons of water add 4 lbs. salt, 1 lb. sugar (or its equivalent in molasses), 1 ounce saltpetre; boil and skim and then add 1 ounce saleratus.

Coffee-making.—The same correspondent writes: An improvement in coffee-making is to frequently, say every three minutes, take it from the fire while burning and shake and blow out the hulls and dirt that come off by heating which will not be removed by the preliminary washing. Wife has tried various methods, and says the recipe on page 31 of this volume (Feb. No.) will be a perfect one, with this additional item in burning.

Indian Bread.—“Icanne,” of Buffalo, sends us this recipe:

“Take 2 teaspoonsfuls of soda or saleratus, well pulverized; 1 quart of sour milk; 4 tea-cups of Indian meal; 2 tea cups of rye or Graham flour; ½ cup of molasses, and salt as needed. Bake 2½ hours.

“The soda in all cooking should be put into the cup in which the milk is measured, and well stirred, and from thence poured carefully into the pan it is made in; then small particles will not be found disfiguring the loaf. The above will make one nice thick loaf, baked in a two quart tin basin with a moderate fire. The last hour and a half, it requires but very little heat; if it bakes too fast on the top, as many stove ovens do, cover with an old three pint tin basin. Those who are ‘experienced’ will understand why an old basin is better than a new one. When done, let it stand half an hour before attempting to take out of the tin; then do up in your bread cloth, and if you do not admit by the next day that it is the perfection of Indian bread, I shall call you no epicure in coarse diet.”

Toothache Remedy.—Mr. John McBradner, of Walton, sends the following remedy or palliative: Clean out the cavity, and insert into it a little cotton dipped in a solution of Gum Copal in chloriform. To reduce inflammation, and swelling, rub thoroughly with a strong solution of one part common salt and two parts saltpetre in water. The gum and chloroform preparation we know to be good. The saltpetre and salt wash we don’t know about Alcohol, mustard, essence of pepperment, or better camphor solution with plenty of ‘rubbing’ is always good.

Big Apples and “Salt Junk.”—Mr. Lydecker, of English Neighborhood, N. J., will please accept our thanks for a magnificent Fallenwalder Apple, left on our desk in our absence “as an evidence that in his locality they had got beyond ‘Salt Junk.’” We consider the evidence perfectly conclusive. If such apples abound in English Neighborhood, salt meats must be at a decided discount.

Advantages of Taking the Papers.—“Experiments,” of New-Jersey, writes on this topic, on three varieties of paper. There are some good thoughts, and if the article were condensed into one-third of the space, we should like to publish it.

Salting Hay.—Albert Mackey, of Ulster County, is right about the diffusion of the salt through the whole mass of the hay. The analogy of salt on hams is a clincher.

A Cheap Way of Increasing Production.—A legal friend writes us from

JONESBOROUGH, E. TENN.

..... Though engaged in a profession, I concluded I would also become a producer, and to effect it, adopted the following plan, viz., to procure subscribers to the *Agriculturist*. On the following page you will find ten, which makes fourteen I have already procured. I have read the *Agriculturist* for some time past and I am satis-

fied that each farmer, who takes and reads your paper one year, will produce as the result, at least twenty bushels more of something for human subsistence and comfort, worth at least ten dollars. This makes 280 bushels worth \$140. Why am I not a producer to this extent? Suppose each one of the 30,000 lawyers in the U. S., were to do this, (it has cost me in all say three hours time,) you have produced 8,400,000 bushels, worth \$4,200,000. Are not small things too much neglected?”

Spanish and Dorking Fowls.—G. F. C., of Amenia, sends us a few good words in favor of these fowls. We have raised them for years and are inclined to think favorably of their merits. The hen fever has subsided.

Outlets for Drains.—“B.” of Shelburn, asks if in underdraining a garden for fruit these are necessary. If the drains ever carry water they should have outlets. The pears and plums will do well on the clay portions if drained.

Dourah Corn.—C. S. Kepp, of Monson, inquires if this article will mix with the Chinese Sugar Cane. It belongs to the same family and will hybridize readily. The sorghum should be planted at a distance from every thing else of the broom corn species.

Country Dwellings and Farm Buildings.—Communications, with drawings on these topics, are on file for examination. Let us have more of them, from different sources, that we may select and illustrate by cuts, the best plans for constructing plain, cheap, and yet comfortable and beautiful rural dwellings and out-buildings.

Manure Enquiries.—The letter of J. I. Paine, and many others of similar character, have not been specially answered, as most of the questions proposed are answered in the regular articles on manures.

New Books.

We have on our table several valuable new books, waiting a thorough examination and notice. We have looked through one of them carefully. It is entitled: *A Practical Treatise on GRASSES and FORAGE PLANTS, comprising their Natural History, Comparative Feeding Value, Methods of Cultivating, Cutting, Curing, and the Management of Grass Lands.* By CHARLES L. FLINT, A. M., Secretary of the Massachusetts Board of Agriculture, &c. Published by G. P. Putnam & Co., New-York.

This is, we think, the best treatise of the kind we have seen on this important subject. The various plants used as forage for animals both in a green and dry state, are fully described, and illustrated with numerous plain cuts. The method of culture is given in detail, with many practical suggestions. We advise our readers to get this book, and *study* it thoroughly, as we are now doing. We shall be happy to assist any distant subscriber in getting a copy. It can doubtless be sent post-paid, by mail to any one forwarding the retail price, \$1 25, as the postage amounts to about the difference between the wholesale and retail price.

Agricultural Exhibitions.

N. Y. STATE.—Next Annual Exhibition at Buffalo, Oct. 6th to 9th, inclusive. Send for full List of Premiums and Regulations to the Secretary, Col. B. P. Johnson, Albany, U. S. Agricultural Exhibition at Louisville, Ky., Sept. 1st to 5th, inclusive.

The Cattle Murrain in Europe.

A fatal disease, which is said to be contagious, prevails very extensively among the cattle in the countries around the Baltic Sea. On the 2d of April the British Government issued an order in Council that hereafter no cattle, horses’ hoofs or hides, shall be brought into the United Kingdom from any of the territories bordering on the Baltic or Gulf of Finland. This order was made after an investigation, and the subject is of no little importance to this country, as these hides, taken from the animals dying of the disease, being shut out from a nearer market, will doubtless be sent here in large numbers, especially as they had been previously prohibited in France, Prussia, and several of the German States. As this disease has prevailed for a year or two past, and it has not yet spread elsewhere, there does not seem to be so much cause for alarm as there would otherwise be, yet we think the matter demands the prompt attention of our Government. A brief delay may lead to the introduction of a disease among our animals producing the loss of untold millions. The “hog cholera” is already creating much apprehension in some of our Western States.

A Correction.—On page 88, by an error in “making up,” the Black Napes and Bang Up Currants got into the list of *Gooseberries*.

SALE OF DEVON CATTLE.—It will be seen by an announcement in our advertising columns, that Mr. Waite will hold his first public sale of Devons, June 17th.

Business Notices.

SUGAR CANE SEED.
LARGE
Special Premiums for
New Subscribers

We recently embraced an opportunity to purchase at a reasonable price, a lot of

500 pounds of very fine
CHINESE SUGAR-CANE SEED

Direct from Count de Beauregard and Leonard Wray, Esq., of Toulon, France. This seed has not been surpassed in purity and quality by any yet offered in this country.

This we have secured for SPECIAL PREMIUMS (outside of our regular free distribution, which will still be continued).

Premium 1st—To each present subscriber who will send us one new subscriber for 1857, and \$1.27, (27 cents for return postage on seed), we will forward a premium of one-quarter pound of seed post-paid. (These packages contain about 5,000 seeds, and are of the same size and weight as those sold in very many places for \$1, or \$1.30 post-paid.)

Premium 2nd—For six new subscribers and \$6, we will send a premium of one pound of seed, post-paid, or two pounds if the seeds go by Express, unpaid. A pound contains about 20,000 seeds.

Premium 3rd—For ten new subscribers and \$10, we will send two pounds of seeds by mail post-paid, or four pounds by Express unpaid.

Here is a chance for conferring a triple benefit by a little effort—first, to those led to read the paper, by your solicitation—second, to yourself by securing a large quantity of pure seed; and third, to the *Agriculturist* by extending its circulation where it might not find its way but for your exertions.

In response to numerous inquiries we will state that we can recommend the Sugar-Cane Seed offered by two parties in our advertising columns, as being of pure and genuine quality; their whole supplies, we are confident, came from the same source as our own, alluded to above.

Plenty of Seeds for Distribution.

In our last we stated that our supply of Sweet Corn was running short. This announcement brought us offers of parcels from several individuals who had it on hand, but had not previously offered it for sale. We are now able to continue our offer of half an ounce or an ounce to new or old subscribers calling or applying by ready-directed envelopes, post-paid with one or two stamps. This offer extends to each kind hitherto proffered, viz.: King Philip Corn; Darling's Early Sweet Corn, Stowell's Sweet Corn, Poland Oats, and the Sugar Cane Seed. As we have scattered from seventy to eighty thousand or more packages of seed (we have lost count of the number), we suppose most of our present subscribers must have obtained what they have desired. If any are still unsupplied, let them send on at once, that we may close up the distribution as early as may be. It is of course unnecessary to hint that any favors from our friends in the way of new subscribers will be thankfully received. We now receive fifty to one hundred daily, and our clerks, who have learned how to take care of three to five hundred a day, are still on hand, ready for duty.

Losses of Seed by Mail.

Out of some 33,000 letters mailed to us this year, about 25 have failed to come to hand. At the same rate, about 60 losses by mail have occurred among the 75,000 to 80,000 packages of seed sent out by us. Let any one having failed to receive their expected packages, apply at once for duplicates; we have enough for all.

Seeds to Canada Subscribers.

We regret that our numerous Canada subscribers are obliged to pay so heavy postage (20 cents an ounce) on seeds. Let those residing near together make up a Club among themselves, and send for a pound or so, including such of the five varieties of seeds we have offered, and have them come by Express. They are welcome to the seeds so long as we have them, and where half a dozen send together, we will cheerfully make up an express package. An ounce each of the three varieties of corn and of the oats, and say one thousand seeds of the sugar cane, will make a package of 2½ pounds for a Club of six, or 4 pounds for a Club of ten, on which the express charges will be but a few shillings, whereas the postage on 4 pounds amounts to \$12.80.

All of our Premium Seeds can be planted as late as the middle of May in most parts of Canada, and in the northern parts of the United States.

Back Volumes.

We have now spare copies of Volumes XII., XIII. and XIV. only. Price unbound, \$1 per volume, or \$1.25 if prepaid by mail. Price, bound, \$1.50 per volume, not available.

With a single exception, the actual regular circulation of the *Agriculturist* to subscribers is about Fifteen Thousand greater than that of any other Journal in the World devoted to Agriculture and Horticulture only.

Advertisement

TERMS—(invariably cash before insertion):

Twenty-five cents per line (of ten words) for each insertion. By the column or half column, \$30 per column for the first insertion and \$25 for each subsequent insertion.

Business Notices Forty cents a line.

Advertisements to be sure of insertion must be received at latest by the 20th of the preceding month.

STRAWBERRIES.

PARDEE'S MANUAL FOR THE CULTURE OF THE STRAWBERRY will insure success, and recommend the best varieties for the different soils and locations. Price.....

60 cents.
Sent by mail, postage free, on receipt of price,
C. M. SAXTON & CO.,
Agricultural Book-Publishers,
108 Fulton-st., New-York.

EVERGREEN TREES.

BEAUTIFUL HOMES AND THE charms of Summer verdure amid the dreariness of a Winter landscape can be obtained by the judicious use of EVERGREENS.

The best time to transplant them is early in MAY.

The most desirable variety is the

NORWAY SPRUCE, both for single specimens and masses. It bears transplanting well, and is a general favorite.

The WHITE PINE ranks next, and, after them, come other varieties like the BALSAM FIR, AUSTRIAN PINE, ARBOR VITÆ, PINUS EXCELSA, &c., while for rich glossy Evergreen Shrubbery, the RHODODENDRON is unequalled.

All these are furnished by

PARSONS & CO.,
FLUSHING, N. Y.,
(near New-York City.)

Whose Catalogues can be obtained by mail, or at 29 Wall-street (basement), New-York.

Trees will be carefully packed and delivered at Fulton Market wharf, New-York.

AGRICULTURAL SEEDS.

THE SUBSCRIBERS OFFER THE following seasonable Seeds, the growth of last year and of unsurpassed qualities. Dealers and others requiring large quantities will be served at very low rates:

Best quantity Red Top Turnip;
Red Top Strap Leaf.....
Large White English Globe Turnip;
do.....
Norfolk do.....
Long White Tankard Turnip;
Yellow Stone.....
Yellow Aberdeen.....
Best American Improved Ruta Baga Turnip;
Imported do.....
do.....
Purple Top.....
And twelve other fine varieties of Turnips.

Early Scarlet Horn Carrot;
Improved Long Orange do;
Long White do;
Yellow Sugar Beet;
Long Red Mangold Wurtzel Beet;
Yellow Globe.....
Fine Mixed French Grass Seed, and other mixtures for Lawns. Also the finest qualities of Red, White, Dutch, Lucerne and other CLOVERS, TIMOTHY, RED TOP, BLUE GRASS, ENGLISH and ITALIAN RAY GRASSES, ORCHARD SWEET-SCENTED VERNAL, the FESCUES and other GRASSES, with a large and complete assortment of VEGETABLE, FLOWER and FIELD SEEDS, of the best qualities, at reasonable rates.

Catalogues on application.

JAMES M. THORBURN & CO.,
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FIELD AND GARDEN SEEDS, AGRICULTURAL and HORTICULTURAL IMPLEMENTS of the most approved patterns.

Farmers will find it to their advantage to call and see our **LITTLE AMERICAN MOWER AND REAPER**.

It weighs only 450 pounds, light draft, no side draft, and warranted to give satisfaction. Sold at the low price of \$100 as a Mower; \$120 as Mower and Reaper. Sold by

GRIFFING BROTHER & CO.,
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FAMILY COW FOR SALE—A VERY superior milker of the Durham breed, large size, handsomely formed, and very gentle. 7 years old. Price \$125. Apply to **JOHN C. JACKSON, 111 Water-st., New-York.**

CHICKEN AND HOG FEED.—FOR sale, a quantity of Beef and Pork Scraps, a superior and cheap article for swine and poultry, also for manure.

WILLIAM C. HALL, No. 432 Ninth Avenue, New-York.

NEW-ROCHELLE OR LAWTON BLACKBERRIES, in large or small quantities, for sale by

R. L. ALLEN, 169 and 191 Water-st.

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A FULL ASSORTMENT OF THE choicest Foreign and Domestic Field and Garden Seeds, raised on our farm for trade. All genuine and of the best kinds. For sale wholesale and retail.

SORGHUM SACCHARATUM, or CHINESE SUGAR-CANE, both of foreign and home growth, put up in dollar packages, with printed directions for planting. Also, by the pound or in larger quantities.

KING PHILIP, or BROWN CORN.

WANDOLO CORN.

WHITE and YELLOW FLINT CORN.

DARLING'S EXTRA EARLY SWEET CORN.

EARLY TUSCARORA CORN.

EVERGREEN, DUTTON, POP and other varieties.

POLLED and OTHER CHOICE SEED OATS—The best in market.

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POTATOES—Prince Albert, very superior, Dikeman, Early June, Ash Leaf Kidney, Mercer, and other choice varieties.

SPRING AND WINTER VETCHES, BROOM CORN.

PEAS of every choice variety. BEANS ditto.

GRASS SEEDS—Timothy, Red Top, Kay, Orchard, Blue Sweet Scented, Vernal, Foul Meadow, &c.

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RED and YELLOW ONION SETS—Top or Button Onions, Potato Onion.

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MUSHROOM SPAWN TOBACCO SEED—Havana, Virginia, and large Connecticut Leaf—all choice varieties.

BIRD SEED—Canary, Hemp, Rape, Maw and Rough Rice.

GRAFTING WAX, WHALE SOAP GUANO and SUPER-PHOSPHATE OF LIME, in small packages of 25 cents each.

FORGING GLASSES, SYRINGES, and a full assortment of HORTICULTURAL IMPLEMENTS, VINE and FLOWERS, CLOVER, GRASS and HEDGE SHEARS, &c., &c.

STRAWBERRY, CERISE, and RASPBERRY SEED—Lawton Blackberry, Red Antwerp, Fassifern and French Raspberry, Hovey's, and other choice Strawberries, Cranberry, Pie, Plant or Rhubarb, Asparagus, Orange Orange, and other fruits.

Fruit Trees and Shrubs of all kinds, in the best condition, furnished to order.

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BOOKS—A choice variety of standard works on Horticulture, Agriculture, trees, drainage, &c., &c.

PARSONS & CO.,

FLUSHING, NEAR NEW-YORK.

OFFER FOR SALE AN ASSORTMENT of Trees and Plants which they have grown for the use of amateurs, and have prepared, by frequent transplanting and other modes, for success in moving.

They are of fine size and symmetrical form, and among them will be found

STANDARD APPLES of fine quality.

STANDARD PEARS, PLUMS and CHERRIES.

PEACHES, APRICOTS and NECTARINES, on Plum stocks and their own roots.

DRY-APF PEAR of fine form, and ready for bearing.

GOOSEBERRIES and **CURRENTS**, strong plants of the best sorts.

RASPBERRIES—FASTOLF, RED ANTWERP, FILLBASKET and other known sorts.

STRAWBERRIES of all the best varieties.

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FOREIGN GRAPES—All the well-known sorts, with some new varieties of great excellence. These plants are propagated from vines that have borne abundantly for some years, and are known to be correct.

Great care is taken in the cultivation of Fruit trees, and none but those of the best quality are allowed to be sent out.

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Contains Trees of all sizes for lawns and streets, including *Elae*, *Silene*, *Scrophularia*, *Scrophularia*, *Catalpa*, *Lindens*, *Tulip*, *Cypress*, *Cypress*, *Larch*, *Elm*, *Aspens*, *Abel*, *Oriental Plane* and all the best varieties of deciduous trees.

It also includes Evergreens of fine size for single planting, and of small sizes at low prices, from one foot upwards, for massing; among them are *Norway Spruce*, *Balsam Fir*, *Austrian Pine*, *Hemlock*, *White Pine*, *Scotch* and other varieties.

The best shrubs include many fine varieties at low prices, for massing, or which the *Rhododendron Catawbiense* can be particularly recommended for its fine evergreen foliage, showy bloom and perfect hardiness.

The ROSES are cultivated in very large quantity, on their own roots, of all the most rare varieties, and to those who purchase in quantity will be sold at greatly reduced rates.

THE EXOTIC DEPARTMENT

Contains a fine assortment of *Camellias*, grown as bushy, rather than tall, slender plants, and also contains all the well-known varieties of exotic plants and many rare sorts introduced from Europe annually. These are all carefully grown for those who desire plants of symmetry and beauty.

CATALOGUES of all the departments will be furnished on application. Great care will be taken in packing, and trees will be delivered in New-York and thence shipped as directed.

SUGAR CANE.

CHINESE NORTHERN SUGAR CANE.—A large supply of Seed of the very best and purest quality just received, and for sale at the NEW-YORK AGRICULTURALWARE-HOUSE and SEED STORE. It can be had by the quantity, or for \$2. Seed enough will be sent by mail, post-paid, to thoroughly plant an acre, with directions for planting and cultivating accompanying each package.

R. L. ALLEN, 169 Water-st., New York.

N. B.—The above seed is equal to any ever sold in this country. It was raised by and obtained from Count de Beauregard & Leonard Wray, Esq., of Toulon, France, who first introduced the cane from Africa and China into France, and thence through the United States Government into this country.

NORTHERN SUGAR CANE SEED.

HAVING PURCHASED FROM MR. WRAY his importation of CHINESE IMPHEE or SORGHUM SEED, grown in France under his own immediate inspection (thereby insuring the utmost purity), and described editorially by Mr. Greeley, in "The Tribune," we offer it for sale in quantities, at ONE DOLLAR A POUND, and in packets, prepaid by mail, at 25 cents, 50 cents and \$1 each. This seed, so superior to any other in market, can be procured only from

J. M. THORNBURN & CO.,
15 John-street, New-York.

Two Pounds required for one Acre.

THE CONCORD GRAPE.

THE ORIGINATOR OF THIS NEW GRAPE offers for sale a fine stock, raised from the parent vine. It has fully sustained its reputation as the

BEST GRAPE FOR OUT-DOOR CULTURE.

Having survived the last two severe Winters unharmed, where the Isabella, Catawba and other vines were killed to the ground.

FOR SIZE, BEAUTY, QUALITY AND BEARING.

It is unsurpassed. It is perfectly hardy, and has never been effected by rot or mildew, while it ripens from three to four weeks earlier than the Isabella, and two weeks earlier than the Diana, in the garden of the proprietor.

The following are some of the testimonials that have been received from different sources respecting this grape:

"We have received from E. W. Bull, of Concord, a fine specimen of the Concord Grape. This new seedling is attracting much attention among horticulturists, and deservedly. It is a large and handsomely clustered Grape, and the flavor of the specimens we have tasted is superior to that of the Isabella."—Boston Journal, Sept. 1854.

"I have taken the liberty to give you the impressions my late visit to your garden produced in my mind. The exhibition of your new Seedling Grape, now laden with its luscious fruit, was to me perfectly satisfactory. The size, beauty, rich bloom and fine flavor of the Grape, fully answer the glowing descriptions that have been given to it. None can look upon the wonderfully luxuriant vines, loaded with their rich clusters, without resolving to obtain one for his own garden." Rev. A. BULARD, Cambridge, Mass., Sept. 19, 1854.

Mr. MILLER, of Calimdale, Pa., says: "Last Summer, when all my native and foreign vines lost most of their foliage, the Concord was the only vine which kept its foliage throughout."

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"I regret the Grapes I received from you did not keep longer. They gave the utmost satisfaction, and every good judge of fruit said they were decidedly better than the Isabella."—J. D. INGERSOLL, Iliion, N. Y., Oct. 1854.

"The most beautiful of the new hardy grapes is undoubtedly the Concord."—J. F. ALLEN, Report Mass. Hort. Society, 1854.

"The testimony in favor of this Grape is certainly very full and from well-known horticulturists. It may be pronounced large, handsome and excellent."—Horticulturist, Dec. 1855.

Opinions of the Massachusetts Horticultural Society.

1852, Sept.—"Seedling Grape from Mr. Bull, large, handsome and excellent."

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Fine, strong plants, at \$1.50 each; \$12 per dozen. Two years old, at \$2 each. Three years old, extra, at \$3 each. A liberal discount to Clubs and the trade.

Orders, with cash or good reference, promptly attended to. Address E. W. BULL, Concord, Mass.

REBECCA GRAPE VINES

FOR SALE.

TO BE READY FOR DELIVERY BY the 15th of May, good strong Plants in pots, propagated from the original vine. Price \$3 each.

Those wishing to obtain this new and valuable Native White Grape, will do well to forward their orders as early date.

WILLIAM BROCKSHANK,
Prospect Hill Nursery, near Hudson,
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GRAPE.

Now is the season for planting.

CHORLTON'S COMPLETE GRAPE-GROWER'S GUIDE.....60 cents.
REEMBELL'S VINE-DRESSER'S MANUAL.....50 do.
ALLEN ON THE GRAPE.....\$1.00

Are works which should be in the hands of every one who has a vine to plant or prune. The increased produce of a single year will pay for them.

Send free of postage on receipt of price.

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PARSONS & CO., FLUSHING, NEAR NEW-YORK, offer for sale—

Norway Spruce, grown far apart, symmetrical and bushy, 1 to 5 feet high, at \$5 to \$50 per 100;

Siberian Arbor Vitæ, 2 feet.....40 do.

do.....40 do.

Cedrus Deodara, 4 feet.....40 do.

Abies Morinda, 12 do.....50 do.

Rhododendron Catawbiense, 1 foot.....50 do.

With many other varieties suitable for the trade, or planting in masses.

"GET THE BEST."

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ALL YOUNG PERSONS SHOULD have a Standard DICTIONARY at their elbows; and while you are about it, get the best; that Dictionary is NOAH WEBSTER's, the great work, unabridged. If you are too poor, save the amount from off your back, to put into your head."—*Ph. Journal.*

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"Every Farmer should give his sons two or three square rods of ground, well prepared, with the awl of which they may buy it. Every mechanic should put a receiving box in some conspicuous place in the house, to catch the stray pennies, for the like purpose."

"Lay it upon your table by the side of the Bible—it is a better expounder than many which claim to be expounders."—*Mass. Life's Best.*

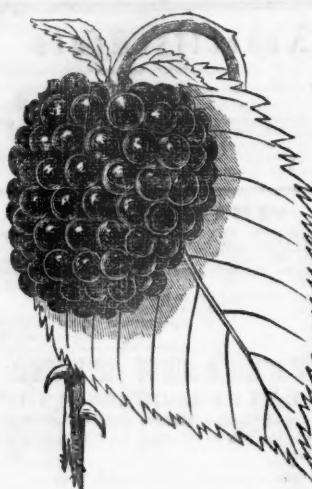
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TO LOVERS OF FLOWERS.

BUIST'S FLOWER-GARDEN DIRECTORY.....\$1.25
BRECK'S BOOK OF FLOWERS.....1.00
Will give you the directions you need for selecting the rarest and best flowers, and for their successful cultivation. These are the best books for amateurs.

Sent free of postage on receipt of price.
C. M. SAXTON & CO.,
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LAWTON BLACKBERRY.

THIS VARIETY IS UNIQUE, AND not as many suppose. "The New-Rochelle Blackberry," improved by cultivation. The plants which abound in that neighborhood are no better than the wild varieties to be found in every part of the country.

CARD FOR 1857.

Packages carefully prepared for safe transportation, will be sold at the following reduced rates:—Half a dozen, \$2; one dozen, \$3; two dozen, \$5; fifty plants, \$10; one hundred, \$18. Descriptive Circulars, and full directions for planting and cultivation, will be furnished with each package. The money should accompany the order, with name and directions distinctly written. Address

WILLIAM LAWTON,
No. 54 Wall-st., New-York;
or New-Rochelle, N. Y.

N. B.—Plants set out before May 15 will fruit next year.

LAWTON

BLACKBERRY PLANTS

The Subscribers announce to their friends and customers that they have now

OVER SIX ACRES

of the

GENUINE LAWTON

BLACKBERRY PLANTS

under cultivation, and in good condition.

They are therefore prepared to fill large orders the coming FALL and the following SPRING.

PRICES.

\$15	per	Hundred plants.
\$10	per	Fifty plants.
\$5	per	Twenty-five plants.
\$3	per	Dozen plants.

N. B. All plants ordered of us will be TAKEN up and PACKED with the GREATEST CARE; and UNDER OUR OWN PERSONAL SUPERVISION.

Of the MANY THOUSANDS

sent out by us last year we have heard very few instances of failure, notwithstanding that they have been forwarded to

EVERY PART OF THE COUNTRY, and the setting out has often been entrusted to unskillful hands. Printed directions for setting and cultivating are sent with every package.

GEORGE SEYMOUR & CO.,
South Norwalk, Conn.

THE ALLEN RASPBERRY.

I AGAIN OFFER FOR SALE A LIMITED number of Plants of this excellent, thrifty, hardy Raspberry. They having been for the first time advertised last Fall, the supply then on hand for sale was mostly taken, and but a few are now left. Next Autumn, they will again be for sale.

LEWIS F. ALLEN, Esq., of Black Rock, N. Y., has for many years cultivated this fruit in the garden grounds (which I now occupy), on his Grand Island farm. It is allied to the Red Antwerp variety, but is not the "true" Red Antwerp of the gardens and nurseries. The bush grows much larger, needs no sort of covering or protection, and bears abundant annual crops of delicious fruit of the best quality.

Packaging of ten to fifty Plants will be delivered at the Express Office in Buffalo previous to the first of May, at 10 cents the Plant. For packages of five dozen or more plants, \$1 per dozen. Remittances to come with the orders.

Address care of L. F. ALLEN, Esq., Black Rock, N. Y., March 21, 1857.

THOMAS DUFF.

CHOICE FARM LANDS FOR SALE.

THE ILLINOIS CENTRAL RAILROAD COMPANY

IS NOW PREPARED TO SELL ABOUT

1,500,000 ACRES OF CHOICE

FARMING LANDS,

IN TRACTS OF FORTY ACRES AND UPWARDS,
ON LONG CREDITS, AND AT LOW RATES OF INTEREST.

THESE LANDS WERE GRANTED BY

the Government to aid the construction of this Road, and are among the richest and most fertile in the world. They extend from Northeast and Northwest, through the middle of the State, to the extreme South, and include every variety of climate and productions found between those parallels of latitude. The Northern portion is chiefly prairie, interspersed with fine groves, and in the Middle and Southern sections timber predominates, alternating with beautiful prairies and openings.

The climate is more healthy, mild and equable, than any other part of the country; the air is pure and bracing, while living streams and springs of excellent water abound.

Bituminous Coal is extensively mined, and supplies a cheap and desirable fuel, being furnished at many points at \$2 to \$4 per ton, and wood can be had at the same rate per cord.

Building Stone of excellent quality also abounds, which can be procured for little more than the expense of transportation.

The great fertility of these lands, which are a black rich mold from two to five feet deep, and gently rolling—their contiguity to this road, by which every facility is furnished for travel and transportation to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found, and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a few years.

Chicago is now the greatest grain market in the world, and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked than those more remote at Government rates, as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer in the reduced price he receives for his grain, &c.

The Title is Perfect, and when the final payments are made. Deeds are executed by the Trustees appointed by the State, and in whom the title is vested to the purchasers, which convey to them absolute titles in Fee Simple, free and clear of every incumbrance, lien or mortgage.

The prices are from \$6 to \$30.

INTEREST ONLY 3 PER CENT.

20 per cent. deducted from the Credit price for Cash.

Those who purchase on long credit give notes payable in 2, 3, 4, 5 and 6 years after date, and are required to improve one-tenth annually for five years, so as to have one-half the land under cultivation at the end of that time.

Competent Surveyors will accompany those who wish to examine these lands, free of charge, and aid them in making selections.

The lands remaining unsold are as rich and valuable as those which have been disposed of.

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Will be sent to any one who will inclose fifty cents in Postage Stamps, and Books or Pamphlets, containing numerous instances of successful farming, signed by respectable and well-known farmers living in the neighborhood of the Railroad lands throughout the State; also the cost of fencing, price of cattle, expense of harvesting, threshing, etc., or any other information, will be cheerfully given on application, either personally or by letter, in English, French or German, addressed to

JOHN WILSON,

Land Commissioner of the Illinois Central Railroad Co.
Office in Illinois Central Railroad Depot, Chicago, Illinois.

FARM FOR SALE,

IN BUCKINGHAM COUNTY, VIRGINIA.

THE UNDERSIGNED, WISHING TO

close his Farming operations in Buckingham County, Virginia, offers for sale, upon reasonable terms, or in exchange for city property, two valuable tracts of land, being within six miles of Buckingham Court House, and adjoining the Moseley & Garrett Gold Mines. One of said tracts contains about 230 acres, and known by the name of "Owen's Mills"—having about 100 acres at present in cultivation, with a growing crop of wheat, corn and oats, with half an acre of ground planted with vegetables, containing, in part, potatoes, beans, peas, onions, lettuce, &c., and enclosed with new fencing. There is on the place a small dwelling-house, and all necessary out-houses, such as stables, &c., with stock of horses, cattle and hogs; farming utensils, &c.; with a steam saw and grist mill, with engine of 35 horse power, and sufficient timber for the support of the place, if required, excepting the timber within one-half mile of a mile of the one first mentioned, and contains 216 acres, is entirely covered with timber, but well adapted to cultivation, the soil being of excellent quality. These lands are in a remarkably healthy section of the State, with an abundance of the best water, and being situated very near the Gold Mines, there is always a ready sale for produce of all kinds. The above lands I will sell low, for a part cash, and a long credit on the balance, or will exchange the whole property in the city of Washington. The growing crop, stock, &c., I will sell in connection with the land, or separate, for cash, or on a short credit. Possession can be had immediately.

Address E. OWEN (now upon the premises), at Buckingham Court House, Virginia; or E. OWEN & SON, No. 212 Pennsylvania avenue, Washington.

GENUINE MOHAR OR HUNGARIAN MILLET SEED—A new and fine variety, very hardy, resisting extreme drouth, and yielding a large quantity of the choicest forage, at the Agricultural Warehouse and Seed Store.

R. L. ALLEN, 189 and 191 Water-st.

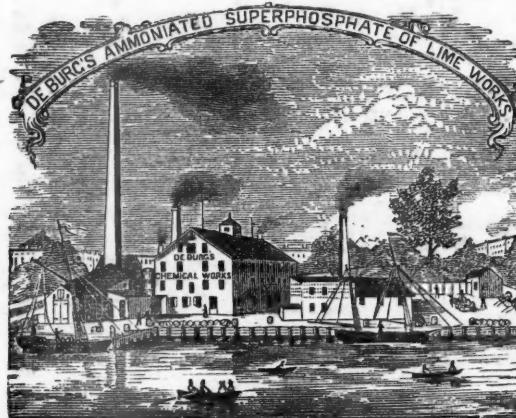
LINNÆUS RHUBARB.

PARSONS & CO.,

FLUSHING, NEAR NEW-YORK.

OFFER FOR SALE THIS SUPERIOR variety of PIE PLANT, at \$10 per hundred, or \$80 per thousand crowns.

DE BURG'S
NO. 1
AMMONIATED SUPERPHOSPHATE.
WARRANTED GENUINE.



C. S. WAINWRIGHT'S
FIRST PUBLIC SALE OF THOROUGHBRED
NORTH DEVON CATTLE,
TO BE HELD AT "THE MEADOWS," ON THE 17TH DAY OF
JUNE, 1837.

THE SUBSCRIBER INTENDS HOLD
ing his first Public Auction of North Devon Cattle, on the
above-mentioned day, at his residence, "The Meadows," four
miles north of Rhinebeck Station, on the Hudson River Railroad,
New-York. The animals to be sold will number between
twenty and twenty-five head, males and females, from calves to
full-grown, all of which have been either bred or imported by
himself, and have perfect Herd-Book Pedigrees.

Catalogues, containing full Pedigrees, and all necessary in-
formation, will be ready on the 15th of April, and will be for-
warded to all desiring it. The subscriber will be happy to have
gentlemen visit his herd at any time.

All sales will be *bona fide*, and no animal on the Catalogue
will be sold until the auction.

C. S. WAINWRIGHT,
"The Meadows," near Rhinebeck, N. Y.

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ON THE HORSE.

DADD'S ANATOMY AND PHYSIOLOGY OF THE HORSE, AND DICTIONARY OF VETERINARY SCIENCE. Splendidly Illustrated. Plain, \$2 00
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LINSLEY'S MORGAN HORSES. "As interesting as a romance." Giving the History of the Morgan Horse, Pedigrees of the Principal Horses of this Breed, and General Instructions for Purchasing, Breeding and Training Horses. \$1 00
THE FIFTH THOUSAND NOW READY.

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PIGS FOR SALE.—TWELVE PAIRS of the Improved Berkshire Breed, this stock having taken the first premium at the two Annual Fairs of this State. Also a very fine large-sized Boar, eleven months old. JOHN B. EDGAR.

Rahway, N. J., March, 1837.

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HOW TO WRITE; A NEW POCKET Manual of Composition and Letter Writing. A popular Hand-Book, embracing hints on Penmanship, choice of Writing Materials, Practical Rules for Letter Writing, COMPOSITION AND PROOF CORRECTING in particular; with Letters of Business, Relationship, Friendship, and Love; illustrated by numerous examples of genuine epistles, from the pens of the best writers; including Forms for Letters of Introduction, Notes, Cards, &c., and a collection of Poetical Quotations. Price, in paper, prepaid by mail, 30 cents; muslin, 50 cents.

The following, in press, will be issued as soon as possible: HOW TO TALK; or Hints toward a Grammatical and Graceful Style in Conversation and Debate. 30 cents.

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One Dollar will pay for the four works, in paper, and \$1 75 in muslin. They will be sent to subscribers, postage prepaid, as fast as issued, by FOWLER AND WELLS,
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NEW-JERSEY PEACH TREES—FIRST CLASS. 1 year banded, 4 to 6 feet high. I will deliver in New-York city for \$75 per 1,000. Also Pear, Plum, Cherry and Quince Trees. WM. DAY. Morristown, N. Y.

BEWARE of unscrupulous experimenters and imitators of the above now acknowledged reliable Fertilizer.

The Subscriber tenders his sincere thanks for the liberal support he has received from the Agricultural community for the past six years, and further assures his patrons no exertions shall be wanted on his part to merit their continued support, by supplying them with a uniform article.

Perhaps one of the best proofs of the value of his compound, is the greatly increased demand, unprecedented in the history of Fertilizers, and not equalled by Guano itself. As there are a large number of Superphosphates in market, for the value of which the Subscriber is not responsible, he earnestly requests all purchasing, to be careful to get the genuine article from himself, or his accredited agents, to whom he holds himself responsible for its good character.

The increasing demand for this favorite Fertilizer still continues. Six years scrupulous trial, on all soils, and in all States, places its success, as a Fertilizer, beyond all problem.

Analysis and testimonials will be forwarded, on application to the Subscriber.

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Four blocks South of Peck Slip Ferry,
WILLIAMSBURG, L. I.,
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ALLEN'S IMPROVED MOWER, AND

A MOWER AND REAPER—the best in America.

A large assortment of the most approved Agricultural and Horticultural implements, of good quality and at low prices.

For sale by R. L. ALLEN,

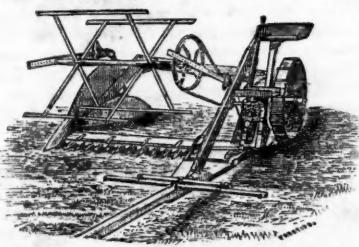
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MANNY'S UNRIVALLED MOWER,
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Principal Office and Manufactory, No. 26 ARCH-street, Philadelphia, Pa. And for sale by all Druggists and Store-keepers in every town and village in the United States and Canada.

MARKET REVIEW, WEATHER NOTES, &c.

AMERICAN AGRICULTURIST OFFICE,
NEW-YORK, April 24, 1857.

The Produce Markets exhibited no remarkable increase of activity, during the past twenty-four business days. River and Lake navigation has been resumed for the season, and several of the Canals are open. The Pennsylvania Canals were in working order about two weeks ago. The New-York Canals are to be ready for navigation by the 6th of May. When all the avenues of reaching the sea-board shall be free, we may look for fresh supplies of produce from the interior, now very much needed, to replenish our stocks, which, by the winter consumption, have suffered a serious diminution.... Bread stuffs have been in good demand at rising prices, chiefly for home use. Shippers having had no encouragement to purchase, save what unusually low rates of freight have offered. Our available supply of Breadstuffs is quite limited—especially of desirable lots of grain.... Cotton opened briskly and buoyantly, commanding 4c. per lb. over the closing rates of last month: but it is now freely offered at a range not higher than four weeks since, yet it is not in much demand, either for home use, shipment, or on speculation. The present stock, here, is 81,500 bales, against 69,000 bales same date last year.... Provisions were freely dealt in during the month.... With increased supplies, hog products have decreased in value. Beef and beef hams have found ready buyers at strengthening prices. Butter and Cheese exhibited no important change.... Groceries have been more sought after at somewhat firmer prices, with diminished supplies, available.... The reported sales included a lot of 800 hds. of New-Orleans Sugar, of the coming crop, (the product of an estate in Louisiana,) for delivery here next season, at 7c., 4 months—quality as usual in round crops. This sale is wholly of an unprecedented and speculative character—yet it betokens the confidence which is generally entertained in the future stability of the markets.... Hay is arriving and selling pretty freely at rather higher quotations.... Hemp, Hops and Grass seeds are depressed and declining, though the stocks in market are limited.... Rice has been in lively demand at decidedly better prices, closing quietly, yet firmly, at the improvement in value.... Tallow is heavy and lower.... Tobacco is more inquired for at advancing quotations, with very moderate stocks, available. The latest accounts from Kentucky and North Carolina are of a discouraging tenor in relation to the prospects of the growing crop.... Domestic Whiskey is somewhat brisker and dearer.... Wool is dull and drooping, owners are willing sellers—but buyers will purchase only such lots as they can not do without, at the prevailing rates.... No important change can be noticed in other commodities.

We annex a comparative list of the closing prices of the principal agricultural products, last month and this, showing the fluctuations since our previous issue:

	March 26.	April 24.
FLOUR—Com'd to Extra State \$5 50 @ 6 15 \$5 65 @ 6 15		
Common to Fancy Western. 5 1/2 @ 6 00 5 70 @ 5 95		
Extra Western. 6 00 @ 8 25 5 95 @ 7 80		
Fancy to Extra Genses. 6 25 @ 8 25 6 20 @ 8 50		
Mixed to Extra Southern. 6 10 @ 8 50 6 45 @ 8 75		
RYE FLOUR—Fine and Super. 3 50 @ 3 00 3 50 @ 4 65		
CORN MEAL.		
WHEAT—Canada White. 1 60 @ 1 70 1 55 @ 1 65		
Western White. 1 50 @ 1 70 1 50 @ 1 65		
Southern White. 1 35 @ 1 55 1 30 @ 1 65		
All kinds, red. 1 20 @ 1 55 1 20 @ 1 65		
CORN—MIXED. 65 @ 69 71 1/2 @ 73		
Yellow. 65 @ 73 73 @ 75		
White. 65 @ 73 73 @ 75		
Oats—State and Western. 52 @ 45 56 @ 60		
Jersey. 51 1/2 @ 35 51 @ 56		
Southern. 49 @ 51 52 1/2 @ 55		
RYE. 85 @ 88 88 @ 89		
BARLEY. 1 50 @ 1 62 1/2 @ 1 65		
White Beans. 1 75 @ 1 75 1 75 @ 1 75		
Blanched Peas, per 2 bush. 4 00 @ 4 00 3 75 @ 3 75		
COTTON—Middlings, per lb. 13 1/2 @ 14 1/2 13 1/2 @ 14 1/2		
4 lbs. per 100 lbs. 4 25 @ 4 50 4 50 @ 4 75		
100 lbs. per lb. 10 1/2 @ 12 1/2 @ 11		
PORK—Bless, per lb. 23 90 @ 24 00 22 50 @ 22 70		
Prune per lb. 19 15 @ 19 25 19 25 @ 19 30		
WHISKY—Country Mess. 12 25 @ 13 25 13 00 @ 14 00		
Prune. 10 50 @ 11 25 10 75 @ 11 50		
HOGS, Dressed, per lb. 93 1/2 @ 10 1/2 9 @ 9 1/2		
Lard, 1/2 hds per lb. 11 1/2 @ 14 1/2 13 1/2 @ 14		
BUTTER—Western, per lb. 17 @ 23 15 @ 21		
State, per lb. 20 @ 30 18 @ 22		
CHEESE, per lb. 13 @ 14 12 @ 13		
PORK—FROZEN—Cured, per lb. 20 @ 24 00 20 @ 24 00		
Mercers, per lb. 25 @ 27 25 @ 27		
ONIONS—Reds, per lb. 3 00 @ 4 00 3 50 @ 3 75		
White, per lb. 3 00 @ 4 00 4 50 @ 5 00		
APPLES, per lb. 3 50 @ 4 00 3 00 @ 4 00		
Eggs, fresh, per dozen. 17 @ 18 13 1/2 @ 16		
FEATHERS, Live Geese per lb. 50 @ 56 50 @ 56		
SEED—Clover, per lb. 11 1/2 @ 15 11 1/2 @ 12 1/2		
Flax, per bushel. Nominal.		
Timothy, mowed, per bushel. Nominal.		
Timothy, reaped, per bushel. 3 72 @ 4 00 3 62 1/2 @ 4 00		
SUGAR, Brown, per lb. Nominal.		
MOLASSES, New-Orleans, pr. gal. 73 @ 76 75 @ 76		
Coffee, R.R. per lb. 12 @ 18 13 @ 20		
TOPS—Kale, &c. per lb. 11 1/2 @ 15 11 1/2 @ 15		
Seed Leaf, per lb. 40 @ 65 32 @ 60		
Wool—Domestic fleece, per lb. 34 @ 52 32 1/2 @ 50		
Domestic, pulled, per lb. 34 @ 52 32 1/2 @ 50		
HEMP—Unbd'd Amer'n pr ton. 100 00 @ 200 180 00 @ 200 00		
Dressed American, per ton. 235 00 @ 265 00 235 00 @ 265 00		
HAY, per 100 lbs. 72 @ 95 70 @ 90		
TALLOW, per lb. 12 @ 12 1/2 11 @ 11 1/2		
WHISKY, Domestic, per gal. 27 @ 27 1/2 26 @ 26		
Oil Cake, per ton. 38 00 @ 38 50 35 50 @ 36 00		

The subjoined tabular statement presents summaries of the total receipts of the leading kinds of Breadstuffs, by railroad, river and coastwise, and of the total sales, here, for twenty-four business days, ending to-day, as well as of the exports from the port of New-York for the same period:

	Receipts.	Sales.	Exports.
Wheat Flour, bbls.	153,000	289,970	34,882
Wheat, bushels.	121,000	204,550	149,382
Corn, bushels.	334,500	920,700	508,949
Rye, bushels.	15,800	76,700	42,574
Barley, bushels.		13,850	

These summaries enable us to make the following comparison of the receipts and sales:

	Receipts.	Sales.
Total 24 days this month in bushels.	1,236,000	2,620,650
Total 24 days last month in bushels.	1,153,850	2,471,200

Increase this month, in bushels. 80,150 149,150

They also afford the following comparison of the exports, from the port of New-York, for twenty-four business days last month, and twenty-four business days, this month:

	LAST MONTH.	THIS MONTH.
Flour, bbls.	96,667	81,882
Wheat, bushels.	204,015	149,382
Corn, bushels.	455,711	308,949
Rye, bushels.	20,314	42,574

The amount of grain remaining in the hands of Wisconsin farmers from the last harvest is represented as being three times as much as was held there at this season last year, and the bulk of it will come forward immediately on the opening of navigation.

Imports of Breadstuffs into Great Britain, during 1856:

	From U. S.	Other countries.	Total.
Flour, cwt.	2,902,707	186,660	3,999,367
Wheat, quarters.	1,200,450	2,792,603	4,002,833
Indian Corn, cwt.	1,001,571	775,943	1,777,514
Oats, quarters.	8,286	1,63,841	161,129
Barley, quarters.		731,412	731,412

This statement—compiled from a report recently presented to the British Parliament—shows that three fourths of the total supply of foreign flour was obtained from the United States, in addition to three fifths of the quantity of Indian Corn and more than a fourth of the quantity of Wheat.

CATTLE MARKET.—The receipts of Beef Cattle for four weeks ending April 22, were 11,705, or about 700 less than during the preceding four weeks. Receipts for the week ending April 1st, 2,495; 8th, 2,579; 15th, 3,326; 22nd, 2,603. Prices varied as follows, April 1st, same as last report; 8th, 1c. higher; 15th, no change; 22nd, 4c. higher—giving a total advance of 1c. @ 2c. for the month. Wednesday, April 1st, prices ranged: Premium cattle, 13c. @ 14c.; First quality, 12c. @ 13c.; Medium quality, 11c. @ 12c.; Poor quality, 11c. @ 11c.; Poorest quality, 10c. @ 11c. General selling price, 11c. @ 12c.; Average of all sales 12c. @ 12c.

Receipts of Sheep during 4 weeks were only 14,116, showing a decline of about 11,200 for the month. This falling off is attributed to the fact that graziers obtain more for their sheep stock when the fleeces and animals are sold separately, than when sold together, and they are holding back till after shearing. Prices now range at 13c. @ 15c., and for extra unshorn animals 16c. @ 18c. per dressed weight; the dressed weight being estimated at about one-half the live weight—and a little more than this for superior fat animals.

The WEATHER so far during this month has been very changeable, cold, with abundance of rain. Two or three of the late storms noted as rained here have been snow. North and West. Farm work is being delayed by the cold and wet, so that the Spring may now be called rather backward. Our condensed Weather Notes read: March 28, to 31, mostly clear and mild; April 1, rain P. M.; 2, 3, and 4, clear with cool mornings, mercury 18° on morning of 2nd; 5, cloudy; 6, rain storm with wind and light snow at night one foot deep at Buffalo; 7, cool, ground frozen; 8, clear and mild; 16 cloudy A. M. rain P. M.; 11, clear A. M., rain at night, 12, 13, 14, very heavy rain storm, abundance of water falling; 15, clear A. M., rain stops P. M.; 16, clear and cool, ice A. M.; 17, 18, 19 cool with raw winds; 20 heavy N. E. rain storm, snow West; 21, cloudy A. M., rainy P. M.; 22, cool and cloudy A. M., clear P. M.; 23, clear and very fine.

The storm on the 20th was a remarkable one, the snow fell to the depth of a foot or more in some parts of Central Pennsylvania and New-York. At Reading, Pa., the weight of snow above, broke down the Railroad Depot, and the same result was produced upon the Suspension Bridge at Rochester, N. Y.

WHEN MAILED.

It is impossible to print, fold, stitch and mail all of our present large edition in less than three days. The first copies of this (May) Number will be mailed to the most distant subscribers on Saturday, P. M., April 25. The remainder of the edition will be mailed on Monday, Tuesday and Wednesday, April 27, 28 and 29—those going the greatest distance being sent off first. All further delays must be charged to the U. S. Post-Office Department.

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The matter of each number will be prepared with reference to the month in which it is dated, and will be promptly and regularly mailed at least one day before the beginning of the month.

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ORANGE JUDD,

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